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REVIEW

OF THE

PAMPHLET OF WILLIAM JUDSON,

(ATTORNEY OF CHARLES GOODYEAR,)

REVIEWING

JOHN RIDER'S GUTTA PERCHA PATENT OF 1852,

NOW OWNED BY THE

North American Gutta Percha Company of New York.

BY LUTHER R. MARSH,

COUNSEL OF THE COMPANY.

Extract from a letter of Z. C. Robbins, Esq., of Washington, to John Rider, on announcing the granting of his patent:

"I think it was a fortunate circumstance for you, that your application for a patent was "at first rejected, and again, and again rejected; for, after such rejections, I have strengthened the specification and claims. *And now, in the shape in which the specification and "claims stand, it is not in the power of human ingenuity to get over, or under, or around "them, or in any way make use of your invention, without a broad and palpable infringement of your patent.* Unless I am greatly deceived, this will prove one of the most valuable patents that has ever been granted. I was informed at the Patent Office to-day, that "it was regarded as an extraordinary case for a patent to be issued after so many positive "rejections."

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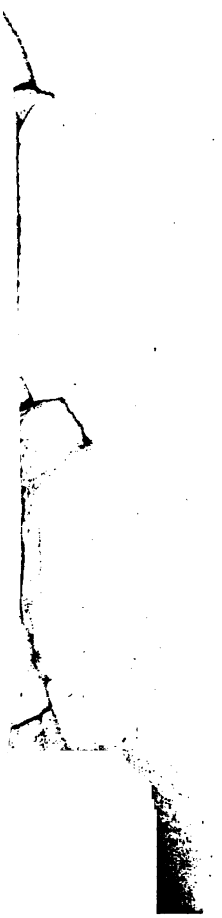

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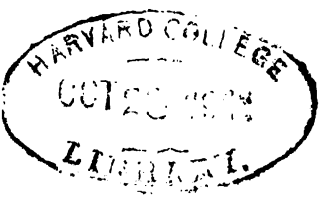

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REVIEW

OF THE

PAMPHLET OF WILLIAM JUDSON,

(ATTORNEY OF CHARLES GOODYEAR,)

Reviewing John Rider's Gutta Percha Patent of 1852.

The legal fog, and cunning twistifications of Mr. Judson, in his late communications through the newspapers, attacking John Rider's Gutta Percha Patent,—his adroit garbling of documents,—his suppression of material evidence within his knowledge,—his exceedingly convenient memory, seized with fits of oblivion as he approaches testimony against himself,—his artful mixing up of subjects in themselves disconnected,—prove him to be an ingenious advocate of a bad cause: and his pamphlet, now under consideration, exhibits all these qualities in yet greater perfection.

Mr. Judson puts forth a claim of *universality* for the patent granted to Charles Goodyear, and maintains that the Letters Patent issued to John Rider, (owned by the North American Gutta Percha Company,) for the manufacture of Gutta Percha fabrics, cannot be operated without infringing upon Goodyear's India Rubber patent.

Now, it is the purpose of this REVIEW, to consider the evidence on which Mr. Judson relies—to explain some of the records brought forward by him—to supply others which he so strangely forgot to speak of—and to adduce such other facts as will enable the public to form a just and true judgment in the premises. We hope to show, conclusively, that the invention of John Rider is an event of great importance to the comfort and progress of our time—that before his invention scientific men, Goodyear included, had labored long and earnestly

to confer elasticity and pliability upon Gutta Percha, but in vain—that Rider himself repeatedly failed in his laborious attempts to accomplish that result—that all the experiments upon Gutta Percha, in which it was treated as if it were analogous to India Rubber utterly failed—that John Rider did, at last, by a new process, achieve the much desired result—that it had never been performed before—that Judson's pretence, that the working of Rider's Gutta Percha patent is an infringement of Goodyear's India Rubber patent, is idle and unmeaning, and put forward for the purpose of impeding the success of this Company, and others formed or to be formed under it, to the end that the Rubber combination may have the benefit of the five years yet remaining of Goodyear's patent—that India Rubber and Gutta Percha are very distinct and dissimilar substances—that the fabrics manufactured under Rider's patent, are every way better, are more durable, better adapted to all climates, of greater strength, and less expensive, than India Rubber goods, and are, beside, free from the various objections so justly brought against the manufactures under Goodyear's patent.

We contend that crude Gutta Percha, and crude India Rubber, are different materials—unlike, either in nature, properties or form—that they cannot be classed as the same, either chemically or mechanically, any more than they are commercially—that a patent granted for the application of the one, can never, in its working, be held to be an infringement of a patent for a similar application, *even by the same process*, of the other—still less, when the application, as in this case, is by a new discovery and process.

If Mr. Judson can demonstrate that these two substances are identical or analogous, then we shall be entitled to a large drawback from the public Treasury, for over-payment of duties; as the Government, not coinciding with Mr. Judson in opinion, has hitherto charged a duty of ten per cent. on India Rubber, and of twenty per cent. on Gutta Percha, thus testifying in a very substantial manner, its conviction that India Rubber is not Gutta Percha, nor Gutta Percha, India Rubber.

We contend also, that the fabrics made of Gutta Percha, under Rider's patent, are not only manufactured in a different manner, but are entirely novel in their character, and very different in their properties from any other fabrics ever before produced, whether from India Rubber, or from this more wonderful material. We may thus enumerate the prominent advantages of these fabrics over those com-

posed of India Rubber,—they are more tenacious—not offensive in odor—a much better repellent of water—more beautiful in finish—less in weight—a non-conductor of electricity, as well as of cold and heat—less affected by oil or other fatty substances—will stand a higher degree of heat, under a longer duration—will not adhere when rolled or packed together—and, withal, (not an unimportant item,) can be produced and furnished to the public at less expense. These differences unquestionably present facts sufficiently "new and useful," to authorize the Commissioner of Patents to issue the patent to Rider, even if he had indulged in the error that the characteristics of the two crude materials were the same.

The Commissioner did grant the Letters Patent, and we hope to show the public, that the opinion of Mr. Robbins, cited on the first page of this Review, is entirely correct, viz., that this patent is one of the strongest and probably the most valuable of any one ever granted by the Patent Office.

In reading the newspaper and pamphlet assaults of Mr. Judson, upon Rider's patent, this idea cannot fail to strike the public—that is to say: If Mr. Judson supposes that the North American Gutta Percha Company, who own Rider's patent, and who have been working under it for many months, having a large factory, and numerous hands employed therein, in Twenty-fifth street, New York, and a sales warehouse at No. 80 Cedar street, selling goods made under said patent, supplying orders for different parts of the world, publishing their advertisements, inviting Mr. Judson to prosecute if he thinks the Company is infringing,—why does not Mr. Judson commence a suit, solicit the interposition of the Court to protect his patent, lay the case before that tribunal which by the Constitution and laws, has especial cognizance and jurisdiction of questions relating to patents and their infringement, instead of vexing the public ear with long columns of unexecuted threats, and advertising, that though he will not sue those who have already engaged in the business, yet that he *will* sue those who may *hereafter* be induced to give their capital or efforts to any manufactures under Rider's patent?

OSTENSIBLE OBJECTS OF JUDSON'S PAMPHLET.

Mr. Judson, in his preface, professes to have *three* objects in view in the publication of his pamphlet. Let us give him the benefit of announcing his own purposes in his own way. He says—

"The object of the following pages is to prove, by printed publica-
"tions, and the records of the Patent Office, that the application *of a*
"*high degree of heat in vulcanizing Gutta Percha*, is an infringement
"of the patent of Charles Goodyear for "*vulcanizing caoutchouc*," and
"that the use of the "*heated rollers*," employed in *softening Gutta*
"*Percha*, is also an infringement of Edwin M. Chaffee's patent for
"the same purpose, as applied to *caoutchouc; both* of which are used
"by John Rider and the North American Gutta Percha Company, in
"*vulcanizing Gutta Percha*, and are described by him in the specifi-
"cation of his patent, a copy of which will be found at the end of these
"pages. The object is also to show the character, extent and value
"of the invention of John Rider, as specified and claimed in his patent
"of June 1st, 1852."

To state these objects more simply, they are, to prove—

1. That Rider's patent cannot be worked, without infringing Goodyear's.
2. That the North American Gutta Percha Company also infringe Chaffee's patent for heated rollers.
3. To show the character, extent and value of Rider's patent.

1. Now, so far as the last object is concerned, we need stop to give but very brief reply. Whatever may be the character, extent and value of Rider's invention, Mr. Judson has no more right or justification to assault it, in pamphlets and public prints, than one merchant would have to make similar publications, showing how poor a business a neighboring and rival merchant was doing—under what great disadvantages he was conducting it—what bad credit he was in, and what miserable goods he sold. This very laborious, unusual, expensive, and libellous attempt, to depreciate the value of the property of the North American Gutta Percha Company, and to misrepresent its character and extent, reveals the trembling solicitude of Mr. Judson, lest, however he may deride the patent of Rider, it is destined soon to supplant the Goodyear patent, to which he is so greatly indebted. But we do not take offence at the slanderous attacks of Judson upon our property, because we really pity his deep distress at seeing the Rubber business becoming entirely superseded by an article in every respect superior; and because he thus furnishes us an opportunity of placing before the public the real, numerous, and substantial advantages, which Gutta Percha fabrics possess.

CHAFFEE'S PATENT.

2. Mr. Judson's second object is to prove, "that the use of heated rollers, employed in softening Gutta Percha, is an infringement of Edwin M. Chaffee's patent for the same purpose, *as applied to India Rubber.*"

As this is evidently a subordinate and *make-weight* object, we shall content ourselves with a summary reply to it. As Mr. Judson seems to be alarmed lest this company may infringe upon Chaffee's patent, (owned by Horace H. Day, Esq.,) we are happy to be able to afford him immediate relief; for the important fact that Gutta Percha is not India Rubber, nor India Rubber Gutta Percha, is a specific remedy for any distress of mind on that subject.

Inasmuch as "heated rollers" were in use, for different purposes of manufacture, long before Chaffee applied them to India Rubber,—inasmuch as Chaffee, in his specification, only claimed the *application of a known machine to India Rubber*, and not to any thing else, and especially not to Gutta Percha,—and inasmuch as we do not use Mr. Chaffee's claim, for any purpose, much less for India Rubber,—inasmuch as Judge Pitman, of the Circuit Court of the United States, for Rhode Island, decided, that neither Goodyear or his licensees, had any right at all to use Chaffee's India Rubber application, as extended,—inasmuch as Judge Ingersoll, of the Circuit Court of the United States, for Connecticut, recently held, that Goodyear and his licensees, might possibly, have *an equitable interest* in Chaffee's extended patent, sufficient to protect them from a preliminary injunction, for using it,—we should suppose that Mr. Judson need not sit up nights to lament over our supposed infringement of the patent of Chaffee. As between the real owner of Chaffee's patent, applicable to India Rubber, (Mr. Day,) and the North American Gutta Percha Company, we presume that Mr. Judson would not be particularly anxious for the success of either party, unless his *well known and intense love for Mr. Day*, should incline him in that direction.

AS TO THE ALLEGED INFRINGEMENT OF CHARLES GOODYEAR'S PATENT.

3. But the main labor of Mr. Judson's pamphlet is to establish his first avowed object and proposition, viz,: "To prove *by printed publications and the records of the Patent Office*, that the application of a

high degree of heat in vulcanizing Gutta Percha, is an infringement of the patent of Charles Goodyear for vulcanizing caoutchouc."

It will be perceived that Mr. Judson does not say, that the application of a high degree of heat in vulcanizing Gutta Percha, is, *in point of fact*, an infringement of Goodyear's patent; but that he *shall endeavor* to demonstrate, by a particular species of evidence, to wit, "*by printed publications and the records of the Patent Office*," that it is such infringement. And we shall see by what suppressions, garblings, and misinterpretations, he endeavors to summon to his aid, this, the only kind of evidence upon which he relies.

Before referring, however, to Mr. Judson's evidence and comments, let us see what Mr. Goodyear's patent *really is*, and what his own opinion was, and is, as derivable from his own acts, specifications and oaths. Charles Goodyear obtained a patent June 15th, 1844, and afterwards surrendered it, and obtained a re-issued patent, December 25th, 1849.

The specification annexed to Goodyear's patent of 1844, describes his invention in the following terms:

"Having thus fully described the nature of the process by which I prepare my improved India Rubber fabrics, I do hereby declare, that I do not now claim the combining of sulphur with caoutchouc, either in the proportion named, or in any other—this combination having been the subject of a patent granted to me on the 24th of February, 1839; but I do claim *the combining of the said gum with sulphur and white lead, so as to form a* TRIPLE *compound*, either in the proportions herein named, or in any other, within such limits, as will produce a like result."

"I likewise claim, *in combination with the foregoing*," viz., sulphur, white lead and India Rubber, "the process of exposing the India Rubber fabric to the action of a high degree of heat, such as is herein specified, by means of which my *improved compound* is effectually changed in *its* properties, so as to protect it from decomposition, or deterioration, by the action of those agents which have heretofore been found to produce that effect upon *India Rubber goods*."

It will be seen from the above, that Goodyear, in 1844, claimed the discovery of a *triple compound*, composed of *white lead, sulphur and India Rubber*, which, when submitted to a high degree of heat, produced a fabric that had properties useful and new. This, Goodyear swore to—swore that this was his invention. But not one word did

he say about *Gutta Percha* in his specification and claim, nor is it mentioned in his patent, for the very good reason, that the article was not then known to the people of this country.

Five years after the issue of the patent of 1844—it having been ascertained that the *triple compound* was not the only compound (of which India Rubber was a part) that could be cured by the use of heat,—after much consultation and great effort to get up a specification that would cover the new idea, and which could be passed by the Commissioner, the old patent was surrendered, and a re-issue asked for, which was granted. The claim upon which this re-issued patent was allowed, is as follows, viz.:

"What I claim as my invention and desire to secure by letters patent, is the curing of *caoutchouc or India Rubber* by subjecting *it* to the action of a high degree of artificial heat, substantially as herein described, and for the purpose specified."

"And I also claim the preparing and curing the compound of *India Rubber*, sulphur and carbonate or other salt, or oxide of lead, by subjecting *the same* to the action of artificial heat, substantially as herein described."

It is now no longer the subjecting of the *triple compound*, but something else, to the action of heat, that he claims to be, and to have been, his discovery. How much ground this re-issue covers, that is not covered by the original patent, and whether the re-issued patent is valid, are questions we leave for others, who may be interested, to decide. It is enough for our present purpose, that, though *Gutta Percha* was well known to Goodyear and his attorney, when this re-issue was granted, yet *no allusion whatever* was made to it, in the specification and claim, or in the re-issued patent. It is fair to conclude, from this omission of Goodyear, even to mention Gutta Percha, as well as caoutchouc or India Rubber, that he did not think Gutta Percha and India Rubber to be the same.

That this was the opinion of Goodyear, may also be proved, by his claims upon which two other patents were subsequently applied for. In April, 1853, Goodyear applied for a patent, for a plan of making moulds, in which both India Rubber and crude Gutta Percha could be moulded; hence, he *then* claimed the use of the moulds for *both* of these articles. So, also, he applied for a patent in October, 1853, for coating iron,—an application in which both Gutta Percha and India Rubber could be used—consequently, he claimed the right for

both of them. The facts relating to his patent of 1844, and the re-issue of 1849, and his two patents above mentioned of 1853, are conclusive proof that the two substances were regarded by Goodyear as entirely different.

There is another proposition of Mr. Judson, that we will refer to, before coming to his evidence in support of his main assertion. He says,

"So far as Rider infringes either the patents of Fowler M. Ray, of which the New England Car Spring Company are the owners, or the patents of William C. Fuller, of which the United States Car Spring Company are the owners, by the manufacture of vulcanized Gutta Percha car springs, we have no concern; though it follows as a corollary, from the propositions laid down by the Patent Office, which are hereafter cited, that that invention is also infringed by the manufacture of vulcanized Gutta Percha car springs; and that a liability is incurred to either the New England Car Spring Company, or the United States Car Spring Company, the one or the other, whichever shall ultimately establish their right and title to the invention."

But Mr. Judson has not told the public, what are the imagined claims of either Ray or Fuller, or wherein he supposes the North American Gutta Percha Company is infringing; nor has he stated the fact, that the contest he refers to, is *one of compromise*—the same stockholders being interested in both companies. Had he mentioned this, the public would have been prepared to receive the great decision in the case pending between the two companies, without a shock.

The inventions of both Ray and Fuller, were for applications of India Rubber in the manufacture of springs, and *not the most distant reference is made to Gutta Percha, in either of their specifications and claims or patents;* therefore, the making of Gutta Percha car springs by the North American Gutta Percha Company, cannot be construed into an infringement of the rights of either Fuller or Ray, for making India Rubber car springs—the *unconcerned* hint of Mr. Judson, to the contrary, notwithstanding.

AS TO THE REJECTION OF NELSON GOODYEAR'S CLAIM.

Mr. Judson seeks to prove, that, because Nelson Goodyear's application was *denied*, the patent to John Rider which was *granted*, is an infringement of the patent of Charles Goodyear.

Nelson Goodyear, it is said, applied for a patent for vulcanizing Gutta Percha, in January, 1852, which was rejected, because the Commissioner considered that the same process had been used in England by R. A. Brooman, under his patent sealed March 11, 1845, and by Charles Hancock, under his patent, sealed Feb. 10, 1847, and in another part of his pamphlet, Judson says, "at the time of the rejection of the application of Nelson Goodyear for a patent, the above mentioned application of John Rider for a patent, was still pending."

The Commissioner could not well have made any other decision, upon such facts as must have been before him. The Commisioner said to N. Goodyear, "you claim compounding Gutta Percha, shellac and sulphur, and heating same from 260° to 280°. The proportions are, one part Gutta Percha, one sixteenth to one-fourth gum shellac, and one-half part to three parts of sulphur." Had the Commissioner of Patents compelled Nelson Goodyear, to show the working of his claim, as he did Mr. Rider, he would have found that it was impossible to make elastic and pliable fabrics under such a claim. And had Nelson Goodyear fully tried it himself before asking for a patent, he would have ascertained, (as it is to be presumed he afterwards did, from the fact, that he did not follow up his application for a patent,) that the process claimed by him was wholly useless, and utterly incapable of producing pliable and elastic goods. The fact, that, under such a claim, such goods cannot be made, is well known to all experimenters with Gutta Percha. This ghost which Mr. Judson supposed he had conjured up in our path, is, therefore, quite easily laid. We need have little fear from the rejected application of Nelson Goodyear.

AS TO THE REJECTION OF THE APPLICATIONS OF BEWLEY AND KEENE.

Mr. Judson alleges, that the patent office has decided that India Rubber and Gutta Percha are the same materials, and thence argues that a patented process for working India Rubber, would be infringed upon, by using the same process, substituting Gutta Percha instead of India Rubber; and, to establish this idea, brings forward from the Patent Office records, two letters, rejecting the applications of Henry Bewley and Charles Keene. The letters as quoted by Judson are as follows, viz.:

"PATENT OFFICE, *August* 7, 1847.

"SIR:—The specification of your alleged improvement in the of Gutta Percha is herewith returned for your further action. * * * There may be patentable novelty in the flexible syringe, but the remaining articles are such as have been made of caoutchouc before and by similar processes, and therefore not the subject of Letters Patent as applied to Gutta Percha. * * * *

"Your obedient servant,

"H. H. SYLVESTER,

"*Acting Commissioner of Patents.*

"TO HENRY BEWLEY, &c."

"UNITED STATES PATENT OFFICE,
"*November* 27, 1847.

"SIR:—Your application for Letters Patent for the application of Gutta Percha to boots and shoes has been examined, and rejected for want of novelty of a patentable character; your mode of using Gutta Percha being the same as generally adopted for caoutchouc, an analogous substance, the office cannot admit, in your alleged improvement any novelty of invention upon which to establish a title to Letters Patent. * * * *

"Your most obedient servant,

"EDMUND BURKE.

"TO CHARLES KEENE, Esq."

These two cases, at first decided on the bare applications, Mr. Judson brings forward, as proof, with the utmost solemnity, and yet entirely suppresses the fact, that after Gutta Percha as compared with India Rubber, became better known at the Patent Office, the Commissioners reversed their decision, and *subsequently granted patents for both these applications.* These patents are duly recorded in the Patent Office. All this, Mr. Judson well knew, but chose to conceal it, for to have told the whole truth, would have annihilated him in his assertion that the Patent Office considered Gutta Percha and India Rubber to be the same.

It is proper to remark, that these two claims, were for applications of crude Gutta Percha (without vulcanization) the inherent properties of which, presented objections so great that the same could not be used with any utility; and consequently, the patents have not been made available to any extent.

MR. EWBANK'S LETTER ON THE ENGLISH PATENTS TO BROOMAN AND HANCOCK.

Mr. Judson quotes a letter from the late Commissioner Ewbank to Nelson Goodyear, of Feb'y 5, 1852, rejecting the above mentioned application of Nelson Goodyear, on the ground that it was in effect the same process as claimed in England, by Brooman and Hancock. The Commissioner says:

"The same application of the same process was described, as applied to Gutta Percha, by R. A. Brooman, in his English patent, sealed 11th of March, 1845. But it was particularly described and claimed by Charles Hancock, in his English patent, sealed 10th of February, 1847. See Newton's Lon. Journal, vol. 34, conj'd series, pages 96 to 104 inclusive. The patentee also says, that he applies the same process to the vulcanizing India Rubber or Gintewan, and describes several ways in which it may be done."

But these two references are unfortunate for Mr. Judson's claim of sameness between Gutta Percha and India Rubber, for those two patents which are for certain processes applied to *Gutta Percha*, were granted by the English Patent Office, when Goodyear's patent of 1844, and Hancock's patent of 1843, *both being for vulcanizing India Rubber*, were on record in that office. Hence, by Mr. Judson's rule, it is evident that the English Patent Office, which had a better chance than ours to judge of the dissimilarity between the two materials, was fully satisfied that they did differ most essentially.

While we are on the subject of these English patents of Brooman and Hancock, on which Mr. Judson bestows so much labor and reliance, we may as well examine them somewhat thoroughly, premising, however, that if Rider's process was the same as those of Brooman and Hancock, it would have but little tendency to show what Mr. Judson avows to be his object, viz., that Rider's patent is an infringement of Goodyear.

We think Mr. Judson cannot be well informed on the subject of these English patents, or he would not be willing to place himself in such false positions. We trust that we have already shown, beyond a doubt, by these two patents, that the English Patent Office long ago evinced its conviction, that Gutta Percha and India Rubber were distinct and dissimilar substances. As the American Patent Office, as

"as the English and French Patent Offices [illegible]

granting of Rider's patent, in each country, that his claim is good, valid, new and useful, nothing further should be required from Mr. Rider or this Company, in justification and support of his patent, to satisfy even Mr. Judson of its impregnable position.

But we will pursue the subject further.

HANCOCK'S PATENT OF 1846.

Before the reader gets half through Mr. Judson's pamphlet, he will readily perceive that the author grows faint on the point which he, at first, assumes so strongly, viz., that Rider's patent is an infringement of Goodyear's. Finding that no one will believe that Gutta Percha is India Rubber, he brings forward the said two English patents, as referred to by Commissioner Ewbank, viz.: 1st, the patent to R. A. Brooman, of March 11th, 1845; and, 2d, the patent to Charles Hancock, of February 10th, 1847. But as Mr. Judson's own witness, the Commissioner of Patents, in granting Rider's patent, decided that Rider's claim did not interfere with either of these patents of Brooman or Hancock, Mr. Judson probably thought that the Commissioner had not examined all the foreign publications on the subject, as the law required him to do. Accordingly, Mr. Judson pores over the dusty volumes—thinks he has found something that escaped the official examination of the Commissioner, and holds up to view a still other patent, granted to Charles Hancock, January 12, 1846—whereupon, he says—

"Now, for the purpose of showing in this place the utter absurdity of any claim to novelty for preliminary heating, the following description, from Charles Hancock's English patent, in January, 1846, is given. Charles Hancock, in a patent granted to him for improved methods of preparing Gutta Percha, January 12th, 1846, gives the following description of his invention:—

"'If the Gutta Percha contains many impurities, it will frequently be desirable previously to submit it to the cleaning process described in the specification of Letters Patent to Richard Archibald Brooman, on the 11th of March, 1845, or any similar process by which Gutta Percha may be freed from its grosser impurities; and I place it, while in a plastic state, in a cylindrical screw-press, kept hot by a steam-jacket or otherwise, and having a bottom perforated with numerous holes. The Gutta Percha is squeezed through the strainers and per-

forated bottom, from which it falls in a much purified state, and the operation is repeated as often as necessary.'

"'I then transfer the Gutta Percha, in this purified state, to a masticating machine, such as is commonly employed in the preparation of India Rubber, and kept hot by any suitable means; and work and knead the Gutta Percha until it is brought to the consistence of *dough* or putty.' 'According to another of my modes of preparing Gutta Percha, instead of passing it through the screw-press, as before described, I take the plastic mass and pass it once, twice, or as much oftener as may seem expedient, between a roller and one or two more adjustable guages, such as are used in caoutchouc manufacture, the roller and guage being heated and kept hot by hot water, steam, or any other convenient means; and then I pass it through the masticating machine as before.'"

Now, if Mr. Judson had desired to state the case fairly, he would have told the whole story. But it is not the first instance, as we have seen in the course of his pamphlet, where he has found it convenient to communicate only a part, and to suppress the residue. Let us see what this claim and patent really are.

The specification to this patent says—

"My invention consists, firstly, in certain improved methods of *preparing* Gutta Percha for manufacturing purposes. If the Gutta Percha to be operated upon, is not very impure, it may be at once *submitted* to the process hereafter described. If the Gutta Percha contains many impurities, it will frequently be desirable previously to submit it to the cleaning process described in the specification of Letters Patent to Richard Archibald Brooman on the 11th of March, 1845, or any similar process by which Gutta Percha may be freed from its grosser impurities. According to one of my methods of preparing Gutta Percha, I place it, in a plastic state, in a cylindrical screw-press, kept hot by a steam-jacket or otherwise, and having a bottom perforated with numerous holes; upon this perforated bottom I place one strainer, or two or three or more strainers, made of perforated metal plate, or strong wire gauze, and resting upon each other, and each succeeding strainer being finer, or having a greater number of holes or meshes than immediately below or preceding it, and so that the finest strainer shall be at the top. I then bring the piston or follower of the press down upon the mass of Gutta Percha, (by hand or other suitable

power,) and I squeeze it through the strainer and perforated bottom, from which it falls in a much purified state. This operation may, if necessary, be repeated, the Gutta Percha being, in such case, in the first instance, passed through a coarser set of strainers, and then through one or more of a finer description. I then transfer the Gutta Percha, in this purified state, to a masticating machine, such as is commonly employed in the preparation of caoutchouc, and kept hot by any suitable means; and work and knead the Gutta Percha until it is brought to the consistence of *dough* or putty."

"According to another of my modes of preparing Gutta Percha, instead of passing it through the screw-press, as before described, I take the plastic mass and pass it once, twice, or as much oftener as may seem expedient, between a roller and one or two more adjustable guages, such as are used in caoutchouc manufacture, for the spreading or cleansing of caoutchouc solution, (the rollers and guages being heated and kept hot by hot water, steam, or any other convenient means;) *or, thirdly*, I take the Gutta Percha, as imported, and dissolve it by means of rectified oil of turpentine, or any other suitable solvent, and filter the solution, while warm, through flannel, or felt or fine wire gauze."

Now, as this patent to Hancock of Jan'y 12th, 1846, is cited by Mr. Judson for the specific purpose of proving that Rider's patent was invalid, because Hancock in said specification had described the same process of preliminary heating claimed by Rider, it will strike the reader with some surprise, that the above specification of Hancock, *does not recite or refer to any such preliminary heating at all, as Rider claims.* Nor can the result produced by Rider's process, be *by any possibility*, obtained, by either of the ways of carrying out Hancock's process above recited. Nor does Hancock claim such an effect for his process, as will appear by the following section of his specification, viz., "It must be understood, that, whilst preparing Gutta Percha, as above described, it must be kept in such a temperature as will cause it to be in a plastic state. The Gutta Percha, prepared by *either* of the modes before described, is rendered fit for any *ordinary manufacturing purposes.*"

The question then is, what were the then "*ordinary manufacturing purposes.*" As the only manufacturing purposes then in progress were, forming Gutta Percha into various non-elastic and rigid articles, the three processes described by Hancock, were, as is evident

also from reading his specification, *simply for cleansing Gutta Percha of its impurities.* In truth, that is the purpose avowed in the specification itself. Beside, the claim of Hancock is for a process for cleansing Gutta Percha of its impurities. Mr. Rider's claim, on the contrary, is not for that purpose, but for a preliminary heating—not to get rid of impurities, but to drive off certain "volatilizing ingredients. whether water, the elements of water, or volatile oils, or acids contained in the crude material." These ingredients are not impurities, but an essential part of the crude Gutta Percha, and the process of driving them off, changes the nature and elements of the substance. Rider's patent provides for taking out the impurities, before submitting the Gutta Percha to the *preliminary heating.*

Under the second head of this specification of Hancock's, the inventor says, "my invention consists in making a compound, elastic, water repellent substance for manufacturing purposes." In doing this, he combines Gutta Percha, jintewan and caoutchouc, and says, "*The Gutta Percha which is intended* to be combined in this way, should, *if necessary*, be cleansed from its impurities, and may, *if desired*, be previously prepared as heretofore described." By which it will be seen, that, under this head, it is not absolutely necessary to be *previously prepared*, as stated under the first head.

Under the *third* head, the inventor says, "My invention consists in combining Gutta Percha and caoutchouc, or Gutta Percha and jintewan, or Gutta Percha, caoutchouc and jintewan, with orpiment, liver of sulphur, or other sulphurets having like chemical properties, whereby, in each case, the compound, besides possessing the water repellent property of Gutta Percha, caoutchouc and jintewan in their simple states, is rendered more permanently soft and elastic." And under the *fourth* head, the inventor says, "If Gutta Percha is incorporated with jintewan and caoutchouc, or either of them, for the purposes of this part of my invention, the proportions of those articles must be varied according to the article required to be produced. The principal difference in the quality is produced by the larger or smaller proportions of Gutta Percha which may be used. *Whenever great elasticity is intended to be produced, the quantity of Gutta Percha should be small: and if intended to be of stiffer or firmer description, then the quantity of Gutta Percha must predominate over the other articles to the extent required to produce the desired result.*"

Hancock, as appears from his own specification, therefore, is not able, with the previous preparation claimed for him by Mr. Judson,

to make an *elastic Gutta Percha fabric, without the use of India Rubber;* and not then, even, without compounding them, according to his patent, *nearly all*, or *quite all, of India Rubber.*

But, be it known, and herein is one of the chief discoveries of Rider, that by his preliminary heating process, the nature of the material is changed, *and Gutta Percha alone, of itself, without the slightest particle of admixture of jintewan or India Rubber, is so prepared, that it can be made permanently pliable and elastic*—a result never before attained. The very least that can be said, therefore, is, that the two processes of Rider and Hancock, must be, and are, most essentially different in their modes of operation, in their description and in their actual results.

But the circumstantial evidence in this matter, is equally strong against Mr. Judson's assumption. This patent of Hancock's was granted in 1846, at a time when great efforts were being made by experimenters in England and other countries, to produce a Gutta Percha fabric, that should have permanently pliable and elastic qualities; which experiments have been continued up to the present time. Now, if Hancock made the invention, Mr. Judson claims for him, it is strange indeed, that the discovery should have remained on record for seven years, without the inventor's having the least idea that he was the discoverer of a process likely to supersede the manufacture of India Rubber; and it is yet more strange that Hancock, after making a discovery of such great value, and so earnestly sought for, should abandon it, without an effort to work under his process, and should become a licensee of another patentee, and carry on the *manufacture of India Rubber*, as Hancock has been and is now doing. Then again, if Mr. Judson's assertions are correct, it is more remarkable still, that the English Attorney General should have passed Rider's claim as he did, and allowed the patent to issue, with Hancock's patent yet on file in the English Patent Office.

But, the most extraordinary feature of all, is, that, after escaping the attention of the English Patent Office, and of the American Commissioner of Patents *under a seeming determination not to grant Rider's Patent*, and of the man of all the world most interested, Hancock himself, it should, at this late day, have remained for the eagle eyes of William Judson, attorney of Charles Goodyear, in peering into a musty volume, to discover, that Hancock, seven years ago, without knowing or even suspecting it himself, was the discoverer of the process of endowing Gutta Percha with pliability and elasticity.

We have dwelt upon the Hancock patent of 1846, at considerable length, that we might rescue it from the confusion and misinterpretation of Judson.

AS TO MR. JUDSON'S CHARGE THAT JOHN RIDER CHANGED HIS CLAIM.

Mr. Judson's next attempt is to show that Rider, after his first application was rejected, changed his claim; though, what influence this would have in proving that Rider's patent was an infringement of Goodyear's, he does not tell us. Not dealing in very mild language, he intimates that Rider may have been guilty of perjury. The following is his argument:

"But what will strike the reader with the greatest astonishment is the fact, that *no claim whatever is made to the preliminary heating process in the first specification.* The claim in the first specification is for an entirely different thing. Could Rider be the inventor of *one* thing, and, by mistake, or accident, specify and claim a *different* thing?

"He made oath to the description which he gave of his own invention in his first specification, as the law requires, and he particularly specified the part which he claimed as his invention; and he has, as the correspondence on file in the office shows, stated that *the high preliminary heating* constituted a distinctive feature of his invention, which all other operators had failed to discover, and that it was *indispensable;* and yet it is neither *described* nor *claimed* as his invention in the first specification. But a thing entirely different *is* claimed, and of which he was *not* the inventor, and which the Commissioner rejected as old and well known.

"Was his real and actual invention concealed by design? If so, it was perjury."

Now, on this subject, it is evident, that Mr. Judson is either unacquainted with the subject he is writing of, or that he wilfully intends to lead his readers to false conclusions. If, we presume, he really knows any thing about the routine of the Patent Office, in the business of granting patents, he surely knows, that almost every specification under application for patents, has to be somewhat changed from the original, before the patent is granted. Sometimes the inventor gets his claims so vague that it is difficult to understand them; sometimes he mistakes them altogether, and claims something else: and frequently, in chemical patents, the inventor does not realize what are the strong points of his invention until they are pointed out to him by those more conversant with chemical patents. Such was probably

the case with John Rider, in his application for his patent in 1852. But the rejection of his application compelled him to go through with the chemical working of his claim, in detail, before the late Professor Walter R. Johnson, then the Government Chemist, and also before Dr. Page and Dr. Gale, the exhibition of which enabled his counsel to fully judge of the matter, and the result was an alteration and strengthening of his claim. No more was done, in this instance, by Mr. Rider or his counsel, than is frequently done by the Commissioner himself, when applicants have no counsel. In such case, where they have made their specifications without the aid of counsel, it is a common practice to alter their specification and claim, under the advice of the Commissioner.

But, of all living men, Mr. Judson, representing Charles Goodyear, should be the last to bring such a charge against Mr. Rider. He probably would not have made it, if he had supposed that any one would have recollected the course that was pursued with his pet patent.

That the justness of Mr. Judson's attack on this patent, may be fully understood and appreciated, and compared with other transactions at the Patent Office, it is proper to repeat, that Goodyear's patent was granted in 1844, for vulcanizing a *triple compound of India Rubber, white lead and sulphur, by the action of a high degree of heat;* which Goodyear swore, in 1844, was a true description of his invention and claim; an oath that was repeated as late as 1845: for, on the 12th of August, 1845, Goodyear again made oath, before the United States Commissioner of the Southern District of New York, that his invention was fully and correctly described in the specification before recited. The following is an extract from his affidavit, taken from the records of said Court, viz.:

"Your orator further shows unto your honor, that *his said improvement is fully and correctly described and set forth in said Letters Patent*, whereby said improvement became well vested in your orator, *according to the terms of said patent*, and still is his property."

"Sworn to, on the 12th day of August, before me,

GEORGE W. MORTON,
U. S. Commissioner."

Now, notwithstanding all this, the said Goodyear, with the consent and advice of his attorney, William Judson, came forward in 1849, surrendered his said patent of 1844, and asked to have it re-issued to him, with an addition to his claims, *which, he alleged, he had forgotten to put into his specification and claim in* 1844, and which, *strange as it may seem*, covered a field of operations very different, and immensely larger, than was covered by his patent of 1844; as will appear by the copy of said claims set forth in a previous page of this Review. However extraordinary it may appear, this re-issue was granted by the Commissioner, and is the patent under which Goodyear's licensees now operate.

These facts would seem to convey the idea, that Mr. Judson will not be very anxious to try the validity of the two patents of Rider and Goodyear, on the points of *amended specifications.*

AS TO THE REJECTIONS OF RIDER'S APPLICATIONS, PREVIOUS TO GRANTING HIS PATENT.

Mr. Judson's pamphlet goes into the history of the difficulties Mr. Rider met with in getting the protection of a patent for his invaluable invention; but does not state *where* the opposition came from, nor what secret influences were at work to defeat the application. He might have thrown some light on that subject. He gives great prominence to the fact that Rider's application was several times *rejected.* The object of Mr. Judson, in this part of his case, is, to derive the argument, from these rejections, that the Patent Office considers Rider's process as applied to Gutta Percha, an infringement of Goodyear's patent as applied to India Rubber. But Mr. Judson seems to have forgotten to state, in this connection, that the Patent Office, when it came to understand the subject better, reversed their decisions, and granted the patent to Mr. Rider. So that, whatever benefit Mr. Judson gets from the rejections, is turned against him, with additional force, by the final decision of the Commissioner to issue the patent.

Mr. Judson should have known, too,—he doubtless did know, but found it convenient to forget—that it frequently happens, that applications are rejected, and afterwards, on a more thorough exa-

mination and better knowledge, granted; and that the patents thus granted are always considered as much safer and stronger than those which are issued at first blush, without such full scientific enquiry. New subjects sometimes come before the Patent Office, upon which it has to be educated. By reference to the Scientific American, of Nov. 12, 1853, under the Editorial head of "Patent Office Report of 1852," allusion is made to an instance of this kind: an application for a patent for a new soap was rejected, on the ground that the claim was based on a principle at variance with the chemical knowledge of the Patent Office, but afterwards freely granted when it was shown that the claim accorded with discoveries pointed out by Leibig, in his Organic Chemistry.

So, Mr. Rider encountered objections to his claim. The Rubber combination was interested in his failure to obtain a patent. Every conceivable obstacle was thrown in his way, independently of those which arose from the fact, that the Patent Office itself did not comprehend the subject, till Mr. Rider had gone through with the practical working of his process, before the appropriate officers.

The following letter of Mr. Robbins, the counsel at Washington of Mr. Rider, to the Commissioner of Patents, in reply to a communication from him, (being the same quoted by Mr. Judson,) while it illustrates some of the foregoing portions of this Review, also demonstrates the necessity Rider was under, of instructing the Patent Office as to the nature of his invention.

MR. ROBBINS TO THE COMMISSIONER OF PATENTS.

May 4, 1852.

"SIR,—Your letter of the 30th ultimo, on the subject of Mr. John Rider's application for Letters Patent, was duly received, and its contents have been attentively considered. You required Mr. Rider to confine his 'specification and claim to the preliminary heating, in a range of temperature from 285 to 430 degrees preparatory to vulcanizing.'

"In reply to this requirement, I would say that the first part of Mr. Rider's invention consists in *expelling* from the Gutta Percha certain *volatile ingredients* by a preliminary separate heating of it to such a range of temperature as will produce that effect. If the Gutta Percha be minutely disintegrated, and sufficient length of time be employed

in the volatilizing process, it is quite likely that its volatile particles may be driven off, at a lower temperature than 285 degrees. And it is not known to Mr. Rider that a higher temperature even than 430 degrees may not be safely applied to Gutta Percha. Therefore, I cannot see the propriety or reasonableness of requiring Mr. Rider to restrict his claim to a particular range of temperature to produce a certain necessary effect, when no evidence has been brought forward by the Patent Office to show that a similar effect had ever been deemed feasible, or has ever been produced by any former experimenter. As this expelling the volatile ingredients from the Gutta Percha is but a preliminary part of the vulcanizing process, and is admitted by you to be new, I am not aware of any rule of law or practice that would prohibit Mr. Rider from laying claim to the three-part process of vulcanizing Gutta Percha, as set forth in his second claim, viz.: first, heating the Gutta Percha; second, mixing with it the requisite chemical ingredients; and third, subjecting the mixture to the action of heat.

"In answer to your requirement, that evidence be furnished to show that 'this preliminary heating is an improvement over processes previously in use preparatory to vulcanizing,' I would say that the Patent Office has not referred to *any* preliminary process of heating Gutta Percha preparatory to vulcanizing, *excepting that of cleaning it of foreign solid substances:* nor has reference been made to the description of any vulcanized Gutta Percha which has the properties of the specimens that have been deposited in the Patent Office by Mr. Rider. I cannot therefore understand what description of evidence you require in addition to what is already before you. If Mr. Rider has vulcanized Gutta Percha by a process admitted to be new, and has by his said process produced a *better* article of Gutta Percha than can be shown or referred to by the Patent Office, it appears to me to be very singular and unusual to require him to furnish other evidence, to show that his process is an *improvement* over other processes before known. And particularly so, when it is taken into consideration, that no proof has been brought forward by the Patent Office to show that Gutta Percha has *ever* been perfectly or usefully vulcanized by *any other process.* Quite a number of patents have been granted for different processes of vulcanizing India Rubber.

"Allow me to inquire if it has been the custom of the Patent Office to require each applicant for a patent, to produce proof that his al-

leged new process of vulcanizing was superior to that of every or any other process before known?"

It is enough for us, that the Patent Office, after witnessing the practical demonstration of the novelty and utility of the invention, *did grant the patent*, notwithstanding all the efforts made to defeat it; and Mr. Judson is welcome to all the capital he can make out of the previous rejections, while we hold *the signature and seal of the Commissioner to the patent itself.*

As Mr. Judson has subpœnaed and brought into Court, Z. C. Robbins, Esq., an able and experienced patent lawyer of Washington, (whose letter is above quoted,) as his witness, we are happy to subjoin the testimony of Mr. Robbins on the point in question —that is, as to the effect of the rejections of Rider's application. In a letter announcing to Rider that his patent had been granted, he says,

"I think it was a fortunate circumstance for you, that your application for a patent was at first rejected, and again, and again rejected; for, after such rejections, I have strengthened the specification and claims. *And now, in the shape in which the specification and claims stand, it is not in the power of human ingenuity to get over, or under, or around them, or in any way make use of your invention, without a broad and palpable infringement of your patent.* Unless I am greatly deceived, *this will prove one of the most valuable patents that has ever been granted.* I was informed at the Patent Office to-day, that it was regarded as an extraordinary case for a patent to be issued after so many positive rejections."

AS TO THE EFFECT OF THE PATENT.

When Mr. Judson says that Rider's process, as patented, is an infringement of Goodyear's patent, he must contend against the deliberate and final judgment of the Patent Office, as evidenced by the patent itself. As to what is the just influence and effect of the patent, we summon a witness to testify, whom neither Goodyear, nor his representative Mr. Judson, will impugn—especially as the remarks we shall quote, were made on Goodyear's behalf, in his famous case in New Jersey, with Mr. Day.

Mr. Webster, the counsel of Goodyear, on that occasion in the course of his argument, remarked,

"In the first place the patent which he" (Goodyear) "obtained is proof of that fact" (viz., that Goodyear was the inventor of vulcanizing Rubber.) "I do not say conclusive, but I do say, *it is in the strongest degree prima facie evidence of originality.*" * * *

"An Act of Congress on this subject has been passed, establishing a certain *quasi* judiciary power in the Commissioner, and it is not now a matter of course, that upon the payment of $30, you can obtain a patent. *The invention must be submitted to the new tribunal, subjected to all the knowledge which it possesses, added to the knowledge of those who usually assist in making the enquiry as to the originality of the invention; and then the patent can only be issued after the preliminary tribunal has passed upon it, and had come to the conclusion that there is nothing in the Patent Office like it; nor in the books of any other country like it; and that it is new and useful.* Then, and then only, can the patent be issued, and then it must be accompanied with the patentee's oath, that he is the inventor," &c.

Therefore, according to the patent law, and according to Goodyear and Judson's construction of it through their great advocate Daniel Webster, the Commissioner of patents, sitting as a "quasi judiciary power," (in this case after the fullest and most searching examination and seeing its practical working) has decided, after applying all the knowledge of the Patent Office, and of the scientific officers connected with it (and in this case, let us add, after the most thorough exploration by those whose deepest interest quickened their scent,) that the invention of John Rider was original, that there was nothing in the Patent Office like it, (consequently that Goodyear's patent was not like it)—that there was nothing in the books of any other country like it, (consequently that neither Brooman's or any of Hancock's patents were like it,) and that it was new and useful.

IS GUTTA PERCHA INDIA RUBBER?

We have demonstrated, pretty conclusively we think, in the previous pages, by the opinion of our Government, of our Patent Office, of the English and French Patent Offices, and of Goodyear himself, that India Rubber and Gutta Percha are not identical,

or analogous, or in any way similar, but that they are two distinct and different materials.

But we propose to follow this question further, and to invoke the knowledge of science and chemistry.

Let us state, however, first, a very essential fact, that is to say, if India Rubber be subjected to the process described in Rider's patent, it will thereby be rendered unfit for use ; and if Gutta Percha be submitted to the process described in Goodyear's patent, it will not produce elastic and pliable goods. The process that vulcanizes India Rubber will not vulcanize Gutta Percha, and the process that vulcanizes Gutta Percha, destroys India Rubber. Are the two materials then the same ?

In its crude state, Gutta Percha has no resemblance whatever to India Rubber, its chemical and mechanical properties are not the same, nor does the tree from which it is taken belong to the same botanical family, or grow in the same latitudes or soil. Let us illustrate some of the differences between the nature and qualities of the two substances, by the following

COMPARISONS.

Gutta Percha, when immersed in boiling water, contracts considerably in bulk.

India Rubber, when immersed in boiling water, expands, and very materially increases in bulk.

Gutta Percha Juice is of a dark brown color, and consolidates in a few moments after exuding from the tree, when it becomes about as hard as wood.

India Rubber Sap is perfectly white, and of about the consistency of thick cream, when it coagulates, it gives from four to six parts water out of ten ; it may be kept like milk, and is frequently drank by the natives.

Gutta Percha first treated with water, alcohol, and ether, and then dissolved with spirits of turpentine and precipitated, yields a substance *consistent with the common properties* of Gutta Percha.

India Rubber, similarly treated, results in a substance, resembling in appearance the Gum Arabic.

Gutta Percha by distillation yields 57 2-3 per cent of volatile matter.

India Rubber by the same process yields 85 3-4 per cent.

Gutta Percha in its crude state, or in combination with other materials, may be heated and reheated to the consistency of thin paste, without injury to its future manufacture.

India Rubber if but once treated in the same manner will be destroyed and unfit for future use.

Gutta Percha is not decomposed by fatty substances; indeed, one application of it is for oil vessels.

India Rubber is soon decomposed by coming in contact with fatty substances, as is well known.

Gutta Percha is a non-conductor of cold, heat, and electricity, and, in its natural state, is non elastic, and with little or no flexibility.

India Rubber, on the contrary, is a conductor of heat, cold, and electricity, and by nature highly elastic and flexible.

The specific gravity of Gutta Percha is much less than that of India Rubber,—in proportion as 100 of Gutta Percha is to 150 of India Rubber, and it is much finer in quality, and a far better conductor of sound.

Fabrics, wrought of India Rubber, require a separate varnish to give them polish. But the Gutta Percha possess a nature of inherent polish, equal in lustre to the varnish and permanent.

The foregoing are some of the prominent differences between these two articles. Chemists, who have analyzed them, vary a little as to their chemical proportions, but all agree, that the chemical properties and mechanical action of Gutta Percha and India Rubber are so entirely distinct and dissimilar, that they should never be classed under the same head, chemically or mechanically, any more than commercially. We confine ourselves, to a few citations.

M. Arppe, a celebrated German Chemist, says:—"Gutta Percha differs in composition from caoutchouc and that the products of dry distillation of Gutta Percha are different from those of caoutchouc. He considers Gutta Percha to be a mixture of six resins, which have been formed from a carb. hydrogen."

R. L. Cane, an English Chemist, says:—"Instead of Gutta Percha being a simple hydro-carbon, as was the general opinion, it is found in its ordinary state to consist of at least two distinct materials, besides a notable proportion of sulphur."

Douglas Maclayan, M. D., F. R. S. E., an English Chemist, in his report upon it in 1846, said:—"Gutta Percha is the Mahyan

name for a substance which is the concrete juice of a large tree, native of the shores of the Straits of Mallaca, Borneo, and the adjacent countries; that the yielding tree is unknown botanically; that it is a large forest tree, and yields this product abundantly; that the substance in its crude state differs in many particulars from caoutchouc, that it is nearly as hard as wood, very tenacious, and not at all elastic; that its most remarkable and distinctive peculiarity is the effect of heat upon it, being capable of undergoing alternate softening and hardening any number of times without change of property.

M. PAYEN, an eminent French Chemist, in an article read before the Academy of Science of Paris in 1852, in regard to Gutta Percha, said: "It does not possess at any temperature the peculiar elastic extensibility which characterizes caoutchouc, that the substance consists of three proximate principles, yellow resin, and Gutta, the separation of which has required very delicate observation, although they are clearly distinguished by several of their properties; the most abundant of these three principles, forming at least 75 to 83 per cent. of the whole mass, is pure Gutta, which presents the principal properties of the commercial substance. The pure Gutta like the other two principles is quickly rendered electrical by friction, and is a bad conductor of heat." In conclusion he said:—"We see thus that the Gutta Percha, as it occurs in commerce, consists of three distinctively characterized proximate principles, besides some other matters in small quantities; the most abundant of these principles possesses the properties of the original substance. I give it the name of *Pure Gutta* or *Gutta;* the other two principles are neutral resins. In order to recal their characteristic properties, I will give the name of Crystalbane or Albane to that which is obtained without difficulty in white crystals, and that of Fluavile to the third, which is yellow, and becomes sensibly fluid at a low temperature. The commercial varieties which I have examined, have given me the following properties, viz:—

Gutta	72 to 82.
Albane	16 to 14.
Fluavile	6 to 4.

WM. ALLEN MILLER, M. D., F. R. S. an eminent Chemist of London, in a recent analysis of both Gutta Percha and India Rubber, said:—"The two substances are a good deal allied in their chemical habitudes, but in their mechanical properties differ widely. They are

produced from trees which belong botanically to different natural orders. Gutta Percha is uniformly attacked by solvents more rapidly than caoutchouc. The substances may be immediately distinguished by the very different appearance they present while undergoing solution. Gutta Percha, below 212 degrees F. softens, and can be moulded into any desirable form; whereas caoutchouc, though it loses its firmness, and considerable part of its tenacity, still retains the elasticity which is its most striking characteristic. The mechanical properties of the two substances at once distinguish them from each other, caoutchouc being eminently elastic, Gutta Percha on the contrary, though extremely tough, is singularly devoid of elasticity. In short, the two substances are so totally distinct they could never be confounded with each other by the most ignorant of superficial observers."

Thomas Drayton, M. D., F. R. S., of London, says:—"The results of his analysis of Gutta Percha and India Rubber were the same as those found by Professor Miller;" and in reply to a letter addressed him by Mr. Wm. Rider, he said:—"You ask me, would a patent granted to use certain compounds in the manufacture of India Rubber, be infringed upon, by an application of the same compounds, under the same process, in the manufacture of Gutta Percha? I answer, in my opinion, no; for the reason that Gutta Percha is not India Rubber. Analysis shows them to be different in the quantity of carbon, hydrogen and oxygen, which constitutes their combinations. Gutta Percha is a non-conductor of heat and cold; India Rubber is a slight conductor of both. India Rubber is elastic in its natural state; Gutta Percha is rigid or non-elastic, and when purified of its woody substance, appears much like horn. It possesses greater tenacity than India Rubber—is finer in grain, and more durable. India Rubber is an exudation from a tree, resembling milk; Gutta Percha is a fibrous, concrete juice, found between the bark and wood of the tree, which, when dried, is Gutta Percha as imported. I have examined both Gutta Percha and India Rubber trees in their native countries; they are botanically dissimilar, and I have never seen the two trees in the same soil or climate.

Letter from James C. Booth, Professor of Chemistry, University, Pennsylvania and Franklin Institute:—

"*Philadelphia*, March 8th, 1853.

"Dear Sir,—Having experimented on Gutta Percha and India Rubber, both chemically and mechanically, I am sufficiently conversant with their properties to give a decided opinion upon them and a positive answer to the question you propound to me.

"Gutta Percha is *so dissimilar* and *distinct* from India Rubber, that in its physical character, it more nearly resembles horn or whalebone; the difference between them in *rigidity*, *elasticity* and *tenacity*, is so evident to the most superficial observation, and obvious to the simplest mechanical tests, that no one can confound them together.

"Since then these two substances, so far from being identical and alike, are very distinct and dissimilar bodies; it is evident that the ingredients used to compound or mix with India Rubber, and secured by patents, may be employed to mix or compound with Gutta Percha, without the least danger of infringing on those patents.

Respectfully yours,

WILLIAM RIDER, Esq., JAMES C. BOOTH.
President N. A. Gutta Percha Company,
New York."

Ure's Dictionary of Arts and Manufactures, 1853, says of Gutta Percha:—"The Gutta Percha tree belongs to the natural family *Sapoteæ*, but differs so much from all described genera, having alliance with both *Achras* and *Bassia*, but differing in some essentials from both, that I am disposed to think it is entitled to rank as a new genus. If a tree be freshly wounded, a small quantity allowed to exude, and it be collected and moulded in the hand, it will consolidate perfectly in a few minutes, and have all the appearance of the prepared article. This substance, when fresh and pure, is of a dirty white color, and of a greasy feel, with a peculiar leathery smell. The great peculiarity of this substance, and what makes it so eminently useful for many purposes, is the effect of boiling water upon it. When immersed for a few minutes in water above 150 degrees Fahrenheit, it becomes soft and plastic, so as to be capable of being moulded to any required shape or form, which it retains upon cooling. If a strip of it be cut off and plunged into boiling water, it contracts in size, both in length and breadth. *This is a very anomalous and remarkable phenomenon, apparently opposed to all the laws of heat.* Late experiments have proved it the best and easiest application ever yet discovered in the management of fractures, combining ease and comfort to the patient,

and very much lessening the trouble of the surgeon. When I think of the farrago of bandages and splints got rid of, the lightness and simplicity of the application, the Gutta would be no trifling boon to mankind, were it to be used solely for this and no other purpose."

Chambers' Edinburgh Journal of 1848, says of Gutta Percha:— "The tree from which it is procured, is said to belong to the natural order *Sapoteæ*, is found abundantly, and is one of the largest in the forests, frequently attaining to the diameter of three, four, or even six feet; the juice is collected and poured into a trough, and, on exposure to the air, quickly coagulates. Below the temperature of 50 degrees it is hard as wood, is exceedingly tough, and only flexible in the condition of thin slips; in the mass, it has a good deal the appearance, and something the feel of horn; its texture is somewhat fibrous; and from the resistance it offers to anything rubbed across it, it appears a good substitute for horn, for the handles of knives and choppers. By an increase of heat, it is made more flexible, until, at a temperature considerably below the boiling point of water, it becomes like softened bees' wax. It is now easily cut and divided by a knife, and may be moulded into all varieties of form, with the greatest ease; or may be cut, and united again so perfectly, as scarcely to exhibit the appearance of a joint, and possessing all the strength of an undivided mass. Whatever be the shape into which the Gutta Percha is now formed, it will retain precisely the same form as it cools, hardening again to its previous state of rigidity. It is in a great measure devoid of elasticity, offering a striking contrast to caoutchouc, but its tenacity is little less than wonderful; a thin strip, an eighth of an inch substance, sustained a weight of forty-two pounds, and only broke with the pressure of fifty-six pounds. When in a hard state it is cut with incredible difficulty with a knife or saw."

"*New York, Dec. 18th*, 1853.

"Dear Sir,—As you experimented to a considerable extent with both India Rubber and Gutta Percha during the two years you were consulting Chemist of the Union India Rubber Co., and as you have had considerable experience in chemical patents, I shall feel much obliged if you will give the result of your experiments and state in what respect you found the two materials to differ.

"Do you consider the difference between Gutta Percha and India Rubber to be such as entitles them to be classed as different materials?

"Would a patent granted for a process of manufacturing India Rubber be infringed upon, in the manufacture of Gutta Percha, provided the same materials and same process were used, excepting the substitution of Gutta Percha for India Rubber?

Very respectfully, your obed't serv't,

"Dr. E. E. MARCY,
No. 115, Tenth st., Brevoort Place,
New York."

WILLIAM RIDER, Pres't
N. A. G. P. Co."

"WILLIAM RIDER, Esq.,
Pres't North American Gutta Percha Co.

"Dear Sir,—In reply to your queries, with regard to India Rubber and Gutta Percha, I have to observe that I consider them different substances, for the following reasons:—

"1st. Their physical properties are very different: Rubber is elastic, while Gutta Percha is non-elastic.

"2d. Gutta Percha becomes plastic at about 145° Fah., and still retains its useful properties, while no such result occurs when India Rubber is submitted to the same temperature.

"3d. When India Rubber and Gutta Percha are submitted to dry distillation, the products are very different.

"4th. The conducting properties of the two substances are different.

"5th. Rubber is destroyed by fatty articles, while Gutta Percha is not injured by them.

"6th. When Gutta Percha and India Rubber are allowed to remain in boiling water a short time, the former becomes *diminished*, while the latter *increases* in bulk.

"These as well as several other important physical differences render it conclusive to my mind, that a patent granted for a process of manufacturing Gutta Percha with the same materials and by the same means, that are now employed in the manufacture of vulcanized India Rubber, would not constitute an infringement upon the latter process. I look upon a triple compound of *India Rubber*, Sulphur and Lead, as essentially different from a triple compound of *Gutta Percha*, Sulphur and Lead. Because the ultimate elements of two substances are similar, or even identical, it by no means follows, that the *actual substances* themselves possess any similarity either in ap-

pearance or properties. For example, hydruret of carbon (*olefiant gas*) is composed of—

Carbon 1 equivalent.
Hydrogen 1 do.

So also, *Paraffine*—a solid substance, fusible like wax, and volatile only at a high temperature, is composed of—

Carbon 1 equivalent.
Hydrogen 1 do.

Surely no one would seriously claim that a useful improvement made in the use of olefiant gas, would also apply to paraffine, because their ultimate chemical composition happens to be the same; or, in other words, because they are *isomeric.*

Oil of turpentine and oil of citron are identical in chemical composition, or isomeric, each composed as follows:—Carbon 5, Hydrogen 4. Will it be contended that all improvements in which oil of turpentine is an important constituent, also includes oil of citron, because the elementary composition of the articles is the same?

The composition of starch and cane sugar is almost identical, that of starch being—

Carbon $_{12}$
Hydrogen $_{10}$
Oxygen $_{10}$

And that of cane sugar being

Carbon $_{12}$
Hydrogen $_{10}$
Oxygen $_{10}$ + aq.

Numerous other articles of this class might be enumerated, all entirely dissimilar in appearance, physical properties and their chemical relations, but the few cited are sufficient to illustrate my position.

In these examples, although chemical analysis shows that the ultimate composition of these articles is the same, yet the manner in which these elementary molecules are arranged is entirely different, thus giving rise to substances possessing totally dissimilar properties, or as Kane remarks, "they are said to be isomeric, because they have the same ultimate composition, but in all their chemical relations, they may differ as widely as bodies which have no element in common." [Kane's Chemistry, page 231.]

The operation of what is termed *Catalysis* demonstrates, that the individuality, and the peculiar properties of substances are determined not so much by identity of chemical constituents, as by the particular arrangement and cohesion of the atoms of those constituents—thus, if we boil starch, with a minute quantity of diluted sulphuric acid, it is converted successively into dextrine, gum, starch-sugar, and finally crystallizable grape-sugar. During this process, the sulphuric acid remains unaltered, and by its *presence*, simply, induces the various atomic or molecular arrangements or reorganizations, which give rise to the different articles enumerated.

It is true that the elements of Gutta Percha and Rubber are somewhat similar, but it is equally true, that the arrangement and organization of these elements are so dissimilar, that two distinct substances is the result. In judging therefore of a substance, we should take into consideration its general appearance, its physical properties, and its chemical relations, rather than its ultimate composition, or the circumstances which have presided over the original organization of its molecules.

Yours, &c.,

New York, Jan'y 3, 1854. E. E. Marcy.

We need cite, we think, no further authority to prove that India Rubber and Gutta Percha are two different substances. The question of identity is a chemical one—a question of fact and science, and not of law; and the foregoing opinions and analyses of some of the most eminent chemists of the day, and whose opportunities of judging have been peculiarly fortunate, would seem to set the matter at rest.

There are, in chemistry, a vast number of substances whose ultimate analysis resolves them into the same number of atoms of carbon, hydrogen and oxygen; therefore, according to Mr. Judson's reasoning, these are all the same, and a patent for the use of one, would cover the use of the whole.

Take a given number of atoms of carbon, hydrogen and oxygen, and transpose them in different ways, and each time a different compound is formed—different in its chemical relations, in its taste, smell, and appearance; yet each compound will have *precisely the same number of atoms, of precisely the same elements*,—hence, whether two given substances are identical, depends more upon the *arrangement* of the constituents, than on the constituents themselves. It is well known,

that, in organic chemistry, all gaseous, liquid, animal and vegetable substances, by ultimate analyses, are resolved into four elements, viz., carbon, hydrogen, oxygen and nitrogen.

Letters are the elements of language. Out of these twenty-six elements, all language is formed. The whole Astor Library holds only the permutations of those twenty-six elements. All knowledge is locked up in them. Are two given words the same, because they happen to be composed of the same elements or letters? The slightest change in the arrangement of these elements produces a very different result—As we are answering Mr. Judson's pamphlet, we may find an apt illustration in the letters of his own name. Out of identically the same elements, we may form, Judson, Jonsud, Josdun, Sodjun, Nudjos, and so on indefinitely. But Mr. Judson will hardly contend that a man may be indicted for forging his name, by signing the same letters in any, except the first, of the different combinations above specified.

So, figures are the elements of arithmetic. Whether we compute the price of a pound of India Rubber, or the distance of a star, we can use only these few elements of nine figures and a decimal. But one must be careful what arrangement he makes of them. It is the arrangement that tells the story. It would make some difference to a man whether his fortune could be computed with the decimals thus, "500,000 *dollars*," or whether the decimals should be placed before the figure, thus, "000,005. *dollars*;"—the manner in which these identical elements are adjusted, would be of vast importance to him.

There are numerous substances besides those already cited, which are as distinct, remote, and dissimilar as can be possible, and yet, upon analysis, yielding the same ultimates. Take, for instance, the essential oils of orange, cubebs and copaiva; these three contain the same number of atoms of carbon and hydrogen, yet it is difficult to imagine two articles more dissimilar than the oils of copaiva and orange.

The following are other examples:

Phosphoric	Acid—Phosphorus,	1—	Oxygen,	5.
Pyrophosphoric	" do.	1—	do.	5.
Metaphosphoric	" do.	1—	do.	5.

These three acids, although being identical in elements, are very different in action.

Again—the following substances are exactly identical in their elements, and in the *proportion* of their elements:

Gum Arabic—Carbon,	12.	Hydrogen,	10.	Oxygen,	10.
Dextrin,	do.	12.	do.	10.	do.	10.
Sugar,	do.	12.	do.	10.	do.	10.
Starch	do.	12.	do.	10.	do.	10.
Woody fibre,	do.	12.	do.	10.	do.	10.

The oil of turpentine and the oil of lemons, are identical in their constituents, to wit—carbon 20, and hydrogen 16.

Another instance:

Oil of Citron—Carbon,	10.	Hydrogen,	8.
" " Orange,	do.	10.	do	8.
" " Cubebs,	do.	10.	do.	8.
" " Copaiva,	do.	10.	do.	8.
" " Cloves,	do.	10.	do.	8.

Numerous instances, to the like effect, might be cited.

When, therefore, Mr. Judson says, that "the chemical relations of Gutta Percha are *almost* identical with those of caoutchouc," it will be perceived that that word "*almost*," is a very essential qualification; for, though they were *exactly* identical, the slightest change in the molecular structure, would produce a very different substance.

Now, Mr. Judson undertakes to give an analysis of caoutchouc by one chemist, and Gutta Percha by another, to show that the two substances are, as he says, *almost* alike in their elements. We give an analysis of both, by Wm. Allen Miller, M. D., F. R. S., of London, to wit:

Gutta Percha,	Carbon,	83.71	*Caoutchouc*,	Carbon,	86.39
	Hydrogen,	12.36		Hydrogen,	12 08
	Oxygen,	3.93		Oxygen,	1.53
		100.00			100.00

Thus proving, as he says, as above quoted, that "the two substances are so totally distinct, that they could never be confounded with each other by the most ignorant or superficial observer."

PATENT LAW APPLICABLE TO THE QUESTION BETWEEN JUDSON AND GOODYEAR.

Lord Chief Justice Tindal said, in Crane vs. Price, Webster's R., 408, "We are of opinion, that if the result produced by such a combination, *is either a new article, or a better article, or a cheaper article*

to the public, than that produced by the old method, that such combination is an invention or manufacture intended by the statute, and may *well* become the subject of a patent."

The Gutta Percha fabrics, as compared with India Rubber, or any other goods, comply, not with one only, but with *all* the above mentioned requirements. They are not only *new*, but are, also, *both better and cheaper to the public.*

Mr. Justice Story says, (3 Sumner's R., 514, 518, Ryan vs. Goodwin,) in the Friction Match case,—"It is certainly not necessary that every ingredient, or indeed, that any one ingredient used by the patentee in his invention, should be new, or unused before for the purpose of making matches. The true question is, whether the combination of materials by the patentee is substantially new. Each of these ingredients may have been in the most extensive and common use, and some of them may have been used for matches, or combined with other materials for other purposes. But if they have never been combined together *in the manner stated in the patent*, but the combination is new, then, I take it, the invention of the combination is patentable."

This decision is cited with approbation in the last Patent Office Report.

But, under Rider's patent, a *different* material, in a *different* combination, from those described in Goodyear's patent, is used, and subjected to a *different* process.

"A patent was taken for water-proofing fabrics, by first saturating them in a solution of alum and lime, and then submitting the fabrics so saturated to a solution of soap, by which a water-proof compound was produced *within* the fabrics so treated. Before the patent, the same materials—alum, lime and soap—had been formed into one solution, and fabrics dipped into it; this had the effect of water-proofing to a certain extent, *on the surface*, but not internally of the fabric; this patent was simply for the different mode of using the same materials for the same purposes. In an action for infringement, the patent was sustained."—Carpmael on the Law of Patents, p. 28.

How much stronger is our case, where we use, not only different materials, but subject them to a different process, from the materials and process described in Goodyear's patent?

name for a substance which is the concrete juice of a large tree, native of the shores of the Straits of Mallaca, Borneo, and the adjacent countries; that the yielding tree is unknown botanically; that it is a large forest tree, and yields this product abundantly; that the substance in its crude state differs in many particulars from caoutchouc, that it is nearly as hard as wood, very tenacious, and not at all elastic; that its most remarkable and distinctive peculiarity is the effect of heat upon it, being capable of undergoing alternate softening and hardening any number of times without change of property.

M. PAYEN, an eminent French Chemist, in an article read before the Academy of Science of Paris in 1852, in regard to Gutta Percha, said: "It does not possess at any temperature the peculiar elastic extensibility which characterizes caoutchouc, that the substance consists of three proximate principles, yellow resin, and Gutta, the separation of which has required very delicate observation, although they are clearly distinguished by several of their properties; the most abundant of these three principles, forming at least 75 to 83 per cent. of the whole mass, is pure Gutta, which presents the principal properties of the commercial substance. The pure Gutta like the other two principles is quickly rendered electrical by friction, and is a bad conductor of heat." In conclusion he said:—"We see thus that the Gutta Percha, as it occurs in commerce, consists of three distinctively characterized proximate principles, besides some other matters in small quantities; the most abundant of these principles possesses the properties of the original substance. I give it the name of *Pure Gutta* or *Gutta;* the other two principles are neutral resins. In order to recal their characteristic properties, I will give the name of Crystalbane or Albane to that which is obtained without difficulty in white crystals, and that of Fluavile to the third, which is yellow, and becomes sensibly fluid at a low temperature. The commercial varieties which I have examined, have given me the following properties, viz:—

Gutta	72 to 82.
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Letter from James C. Booth, Professor of Chemistry, University, Pennsylvania and Franklin Institute:—

Goodyear's process if he choose, because Goodyear's patent is only for vulcanizing India Rubber, not Gutta Percha." "That the two substances are not the same or allied." "That they are not chemically or mechanically alike." Now, it is not our purpose, at this time, to show the incorrectness of these statements, because the admission of their substantial correctness would not be sufficient for Mr. Rider's purpose, or prove his case, though in passing, we will simply say, that Dr. Page, in an article published by him in Silliman's Journal, while examiner in the Patent Office, treats of Gutta Percha as a modification of caoutchouc; and says that it yields by distillation similar products to caoutchouc; and Professor Silliman, in the same journal, says the chemical relations of Gutta Percha are almost identical with those of caoutchouc. Separated from its impurities by hot water, and from the accompanying resins by alcohol and ether, and submitted to analysis, it gave, according to Soubeiain, carbon 87 8-10ths, hydrogen 12 2-10ths while, according to Farraday, caoutchouc gave, carbon 87 2-10ths, hydrogen 12 8-10ths; and Rider himself states, in the specification to this very patent, that "there has been an erroneous conception that Gutta Percha is identical in constitution and character with gum elastic, and that every operation in the process of vulcanizing this last named material might be applied to the treatment of Gutta Percha." We say the admission that the two substances, caoutchouc and Gutta Percha, are not the same, or identical, either chemically or mechanically, will not suffice for Mr. Rider's defence against an action for infringement of Goodyear's patent. It is enough for our purpose that they are analogous or similar substances, and that the one may be used as the equivalent of the other: and it makes no difference whether caoutchouc, or several varieties and modifications, or of equivalents, are claimed in so many words in the specification, (as is the case with some patents which have been taken out for vulcanizing caoutchouc,) or not. The legal effect is the same, and the fact that Gutta Percha was not known at the time Goodyear's patent was granted, is in Goodyear's favor. There is no doubt of the correctness of this principle, and the Patent Office so decided on this very application of Rider's for a patent. Does Mr. Rider deny this? Until he does, it is idle for him to deny the liability of purchasers of the stock of this Company or licenses under Rider's patent, as infringers of Goodyear's patent. Mr. Rider inquires, "Why don't Goodyear sue the Company?" Some of the reasons why prosecutions have not sooner commenced, Mr. Rider knows. The Company in its corporate capacity we shall never sue. Its officers and stockholders are individually and personally responsible for the infringements complained of. Until within two weeks past we have not heard of the name of a single responsible stockholder in the Company, and now know of but one. Perhaps Mr. Rider will not object to give us the names of some of the most responsible of them.

But all that the Company have done (except what they have done as infringers on Goodyear's patent in vulcanizing India Rubber) to perfect the manufacture of vulcanized Gutta Percha, and to render it profitable as a business which will require the expenditure of much time and money, if it is ever so perfected, (as was the case with vulcanized India Rubber,) is for Mr. Goodyear's benefit.

They are building upon and improving his property. At the end of about five years, (the termination of the patent,) Goodyear's title to this property expires, and it will then belong to the public. If Mr. Rider, at the end of that period, can prove his title to the particular improvements for which he has a patent, he will then be entitled to enjoy the exclusive benefit of them till his title expires.

But Mr. Goodyear does not mean to render himself obnoxious to the charge of having silently stood by and witnessed improvements made on his property without asserting his rights. Mr. Rider cannot certainly complain of Mr. Goodyear's silence, whatever innocent stockholders without notice may do, for Rider has profitted by that silence to make sales of the stock of the Company. They may lose; he cannot. Their money, or so much of it as is absorbed in paying for this patent, will, we suppose, be expended in defending prosecutions for infringement. But if it should be at last decided that what the Company had done was not a violation of Goodyear's patent, is any stockholder of the Company aware of the position in which they will then stand? We leave this to their own investigation, at least for the present. At another time and on another occasion, we may tell them. I shall close this communication with a single remark upon a statement of Mr. Rider's, which is, "That all the stock that the Company desire to dispose of is sold." The Company, it seems, place a higher value upon the stock than it has been or can be sold for. This, we have no doubt, will be gratifying intelligence to some of the owners of the stock, and the Company will not be so regardless of its own interests as not to avail themselves of any opportunity that may be offered to purchase the stock from such stockholders as may be willing to part with their shares for less than they gave for them, and much less than their actual value.

WILLIAM JUDSON,
Attorney for Charles Goodyear.

RIDER'S REPLY TO JUDSON'S, No. 2.

Gutta Percha vs. India Rubber.

The cheapness and great superiority in every respect of Gutta Percha fabrics made under Rider's Patent by the North American Gutta Percha Company over those of India Rubber, have really aroused the Rubber patentees to a realizing sense of the fate that surely awaits them. As this invention presents the astounding fact that Gutta Percha can now not only be applied with vast utility to the manufacture of all the most prominent articles now made of India Rubber, as well as to hundreds of others to which Rubber by its inherent properties, is excluded, I am not surprised at their struggles and gaspings in the advertising columns of the newspapers. The last defence of Rubber appears over the signature of William Judson, as the attorney of Charles Goodyear, who would make the public believe that Goodyear's patent covers not only the exclusive right to make the fabrics named in his specification, but every other fabric, though far superior, and made of other materials, and in a different way, if it can be applied to the same uses, or, in other words, if it take the place of India Rubber. His legal verbiage and twistification cannot conceal the fact that his real object is to frighten everybody from purchasing rights of this Company to work Gutta Percha under Rider's patent, so that the enormous profits so long monopolized by the Rubber combination may not be cut off. He threatens hard, to be sure, but says he will not sue our Company, which no doubt is the truth.

Mr. Judson seems troubled because I stated the fact that this Company could not use Goodyear's process for vulcanizing Rubber, in its manufacture of Gutta Percha, if it would, and would not if it could. To treat Gutta Percha only in the way Goodyear treats India Rubber, would not vulcanize it, as is well known by all the Rubber combination;—to treat India Rubber as we treat Gutta Percha, will destroy it entirely, which is equally well known. Every one who has seen the two materials, in their crude state, knows that they are entirely different.

Gutta Percha clothing and other articles, when manufactured under Rider's patent, somewhat resemble India Rubber goods of the same kind, it is true, but their properties are very different, and far superior, as will appear by the following comparison: India Rubber, in all warm exposures, decomposes, and becomes so sticky and dirty as to be ruined for further use. One great and important characteristic of Rider's Patent Vulcanized Gutta Percha is, that it will not decompose and become sticky, under any exposure; herein it is admirably adapted for all warm, as well as other climates. India Rubber has an odor about it which is very unpleasant. Gutta Percha is perfectly free from it. India Rubber, by friction, forms a pasty, sticky substance. Gutta Percha wears away dry. India Rubber is decomposed and ruined by coming in contact with oil or other fatty substances. Gutta Percha is not—as is shown by the fact, among others, that it is used extensively for oil cans. India Rubber is charred and ruined by acids, which do not in the least affect Gutta Percha. India Rubber if once melted, cannot be recovered again. Gutta Percha may be melted and cooled any number of times without injuring its quality or virtue. India Rubber is a conductor of electricity, as well as heat and cold. Gutta Percha is a good non-conductor of them all. The India Rubber of commerce is an elastic gum. The Gutta Percha of commerce is a woody, fibrous material, and about as hard as wood. The two materials are the productions of trees belonging to different botanical families, and were never found in the same latitude or soil. Yet, Mr. Judson would humbug the public into the belief that Gutta Percha is India Rubber, and India Rubber Gutta Percha.

The fact that the Patent Office has granted patents for applications of Gutta Percha in the manufacture of quite a number of different articles, which had long before been made of India Rubber, is enough to show that that Office does not consider the two materials to be the same. Even Goodyear himself, by two patents for applications to certain uses, recently taken out, shows that he considers the two materials to be different. Mr. Judson, by the very heading of his article shows his conviction that they are not the same; and the granting of Rider's Patent, after being rejected three times, under a determined opposition from some quarter, not only shows that the Office did not consider Gutta Percha to be India Rubber, but establishes the validity of the Patent beyond a question.

But, notwithstanding all this, Mr. Judson still tries to show the sameness of the two materials, by asserting that analysis yields product somewhat similar. What if it does?—that proves nothing. Sugar and starch are quite as nearly alike; but let Mr. Judson try starch in his coffee for a month or two, and, however stiff it may make him, he will not assert that starch and sugar are "identical," "analogous," or "equivalent;" nor would sugar answer to stiffen his dickey. By this rule Mr. Judson would hold that beets, potatoes, sugar cane, and maple trees, are identical or equivalent, inasmuch as they produce sugar. According to Mr. Judson's theory, all things in the world are substantially identical and analogous, as, in the last analysis, they come down to a few organic principles.

But Judson grows learned, and quotes two authorities, which, as he says, show that the chemical relations of Rubber are "almost" identical with those of Gutta Percha. That "almost" is nearly as troublesome as the farmer's "if." To show what he carefully kept back, I will cite an opinion or two:

Mr. Arppe, a celebrated German chemist, says: Gutta Percha differs in composition from caoutchouc, that it is nearly as hard as wood, very tenacious, and not at all elastic; that its most remarkable and distinctive peculiarity is the effect of heat upon it, being capable of undergoing this alternate softening and hardening any number of times without change of property.

M. Payen, a French chemist, in an article read before the Academy of Science, of Paris, 1852, says: Gutta Percha does not possess, at any temperature, the peculiar elastic extensibility which characterizes caoutchouc; that it consists of three proximate principles—yellow resin, white resin and gutta; the most abundant of these three principles, forming at least from 75 to 82 per cent. of the whole mass, is pure gutta, which presents the principal properties of the commercial substance.

Wm. Allen Miller, M. D., F. R. S., of London, in a recent analysis of Gutta Percha and India Rubber, says: The two substances are a good deal allied in their chemical habitudes, but in their mechanical properties differ widely; they are produced from trees which belong, botanically, to different natural orders. The two substances may be immediately distinguished by the very different appearance they present while undergoing solution. The mechanical properties of the two substances at once distinguish them from each other—caoutchouc being eminently elastic; Gutta Percha, on the contrary, though extremely tough, is singularly devoid of elasticity. In short, the two substances are so totally distinct, that they could never be confounded with each other by the most ignorant of superficial observers.

Thomas Drayton, M. D., F. R. S., of London, says, the results of his analysis of Gutta Percha and India Rubber were the same as those found by Professor Miller; and in reply to a letter written him by the subscriber, he says: "You ask me, would a patent granted to use certain compounds in the manufacture of India Rubber, be infringed upon by an application of the same compounds, under the same process, in the manufacture of Gutta Percha? I answer, in my opinion, No; for the reason that Gutta Percha is not India Rubber. Analysis shows them to be different in the quantity of carbon, hydrogen and oxygen, which constitute their combinations. Gutta Percha is a non-conductor of heat and cold; India Rubber is a slight conductor of both. India Rubber is elastic in its natural state; Gutta Percha is rigid or non-elastic, and when purified of its woody substance, appears much like horn. It possesses greater tenacity than India Rubber—is finer in grain, and more durable. India Rubber is an exudation from a tree, resembling milk; Gutta Percha is a fibrous, concrete juice; a substance found between the bark and wood of the trees, and a pulpy substance taken from the roots, which, when dried, are Gutta Percha as imported. I have examined both Gutta Percha and India Rubber trees in their native countries; they are botanically dissimilar, and I have never seen the two trees in the same soil or climate."

James C. Booth, Esq., Professor of Chemistry in the University of Pennsylvania and Franklin Institute, in reply to a letter addressed to him by the subscriber, says: "Gutta Percha is so dissimilar and distinct from India Rubber, that in its physical characteristics it more nearly resembles horn or whalebone. The difference between them in rigidity, elasticity and tenacity, is so evident to the most superficial observer, and obvious to the simplest mechanical tests, that no one can confound them together. Since then these two substances, so far from being identical and alike, are very distinct and dissimilar bodies, it is evident that the ingredients used to compound or mix with India Rubber, and secured by patents, may be employed to mix or compound with Gutta Percha, without the least danger of infringing on those patents."

The foregoing testimony, as a sample of other evidence in our possession, is offered for the consideration of the public; and I would suggest to Mr. Judson, that it might be well for his reputation in future, if he would take a few lessons in Organic Chemistry, before he writes any more on that subject.

If Mr. Judson is really anxious to learn about the responsibility of our stockholders, he shall be advised by calling at our store, where he can be shown the names of about sixty good and true men, who have the reputation of being responsible; who pay their notes, and who, after enjoying our patent as long as the Rubber combination has enjoyed Goodyear's, I hope will not become so purse-proud as to imagine that they not only own the Patent Office, but possess all the money in the world.

If Mr. Judson desires another trial regarding the validity of Goodyear's claimed invention, he can easily have it; and can have, also, some facts brought out that Mr. Day could not reach, and which may show, not only how far Charles Goodyear is entitled to the credit of being an inventor, but may tell something about the testimony used in the case against Day.

I go for the protection of patent property to the fullest extent of the law, and will not knowingly infringe myself, nor countenance any other person in infringing on the rights of others; and I trust a discerning public will frown down all overgrown combinations that aim to beat down poor inventors.

In the meantime, I invite the public to examine our Gutta Percha clothing and other articles, at our warehouse, No. 80 Cedar street, and satisfy themselves as to the truth of the facts herein stated.

Rights of Manufactures, under Rider's patent, for sale on liberal terms, and the enjoyment of the same fully guaranteed to the purchaser against all infringers.

A fuller statement, in pamphlet form, will be ready for gratuitous distribution at our store, in a few days.

WM. RIDER, President, N. A. G. P. Co.

JUDSON'S, No. 3.

Manufacturers of Vulcanized Gutta Percha, Infringers on Charles Goodyear's Patent for Vulcanized India Rubber.

The reader of Mr. RIDER's article, who had not read the article to which his is a reply, would take it for granted, that the *question* at issue between us, is the *one* which he discusses, and the *only* one, because he does not allude to any other; but those who have read both articles need not be told, that in Mr. Riders's reply the *real questions* at issue have been entirely overlooked or avoided.

The only point which Mr. Rider labors to establish is, that India Rubber and Gutta Percha are not the same or identical, either chemically or mechanically. He had made the same statements in a previous article, of which his reply is but an amplification. We had for the sake of the argument *admitted* these statements to be true, but insinuated that it was admitting a good deal, considering that Dr. Page treats of Gutta Perch as a "modification of caoutchouc;" that Professor Silliman says, "the chemical relations of Gutta Percha are almost identical with those of caoutchouc." That the analysis of Sonberuin and of Farraday gave for Gutta Percha carbon 87 8-10, hydrogen 12 2-10, and caoutchouc carbon 87 2-10, hydrogen 12 8-10; and, considering also that the difference between the two substances could not be so *very* great, if the manufacturers themselves have always erred as to their identity, as Rider, in his specification to this very Patent states they have previous to his experiments, in these words: "There has been an erroneous conception that *Gutta Percha* is *identical* in constitution and character with *Gum Elastic*, and that every operation in the process of vulcanizing the last named material, might be applied to the treatment of *Gutta Percha*."

Notwithstrading this, we proceeded on the *admission* of Mr. Rider's claim, that the two substances were *not* the same or indentical, and laid down the following propositions, which Mr. Rider has not even *attempted* to answer, and cannot answer.

First, That Rider uses Goodyear's patented process of vulcanization, in vulcanizing Gutta Percha.

Second, That because Rider has added something to Goodyear's patented process of vulcanization in vulcanizing Gutta Percha, and procured a patent for it, he does not thereby acquire a right to use Goodyear's process.

Third, That admitting all that Mr. Rider *now* contends for, as to the great dissimilarity in constitution and character between the two substances; Mr. Rider and the stockholders in his Company are, nevertheless, by using Goodyear's process, *liable as infringers*, because it is enough that they are analogous substances, and the Patent Office, we affirmed, had decided this very point on the application of Rider for this very patent.

The first proposition stands uncontradicted, and we shall not, therefore, restate the proofs by which we establish it.

The second is the statement of a familiar legal principle which no one will dispute. But its application to this case is denied, because Mr. Rider says India Rubber and Gutta Percha are not the same, or identical, which amounts to the same thing as a denial of the legal principle established by the Commissioner of Patents in this very case, that it is an infringement of Goodyear's patented process for vulcanizing India Rubber to use the same process in vulcanizing Gutta Percha, which was the third proposition.

Mr. Rider does not deny that the Commissioner of Patents made such a decision, but cites the opinions of some *chemists*, that the application of Goodyear's process to Gutta Percha would be no infringement—to use the words of one of them—"for the reason that Gutta Percha is not India Rubber." But this is no reason at all, for, according to the decision of the Patent Office—the appropriate tribunal to settle such questions—it is enough that the substances are analogous—they need not be the same or identical—and such, undoubtedly, is sound law.

Mr. Rider intimates that he shall dispute the validity of Goodyear's patent.

Mr. Rider in this betrays his weakness. The opinions of *chemists* on questions of *law*, before a *legal tribunal*, may do for the *newspapers*, but hardly for the *Court*.

The question of infringement on Goodyear's patented process, is not quite so clear, then, that Mr. Rider is willing to rest his defence on it; but he means to deny that Goodyear was really the inventor of it, and perhaps he means to swear that he himself was—but a consideration of the fact that we have the affidavits of Mr. William Rider and his brothers, in which all of them swear that Goodyear was the inventor of the vulcanizing process, dispels all apprehension on our part that Mr. Rider will *now* swear to the contrary or attempt to procure testimony to prove the opposite of what he has sworn he knows was the truth and the fact, as he intimates he will do. And if our reminding him of this, which he had probably forgotten when he made his threat, has saved him from the danger and disgrace to which he was exposed, he owes us some service.

But what a flattering prospect does Mr. Rider hold out to the stockholders of his Company!

A renewal of a nine years' controversy, which has exhausted the resources of Mr. Day and his friends,—a controversy which has been carried on with an energy and perseverance, and a lavish expenditure, without a parallel in this country, and against as formidable an opponent as perhaps was ever known. Yet Mr. Rider would like to indulge his vanity

by occupying the same ground on which Mr. Day expended his *own* money; Mr. Rider means to spend the money of *his stockholders*, that is to say, so much of it as he does not appropriate to himself for his patent.

But what do these stockholders gain if Goodyear's patent should be destroyed? They will lose all they have paid towards Rider's patent, and all the expenses of the litigation, and Goodyear's patent will become common property. Of what value, then, will Rider's patent be in public competition with Goodyear's? But if any of Mr. Rider's friends, or any of the stockholders of his Company, have a desire to carry on a litigation with Goodyear, it would be more sensible to loan the money to Mr. Day. He will use *the whole of it* in litigating Goodyear's patent, and none of it will be absorbed in paying for patent rights.

But do the stockholders of Mr. Rider's Company know what John Rider *claims* to be his invention?

Do they know whether he is the inventor of *what* he claims, and if he is, whether it is of *any value?*

Do they know whether John Rider, in his application for this patent, swore that he was the inventor of *one* thing, but procured a patent for an entirely *different* thing?

We venture to say that not one of these stockholders know, or has ever been correctly informed. But Mr. Rider, for the purpose of showing how little all these considerations have affected him, but not, we will charitably suppose, with any real purpose or design, offers for sale rights to manufacture under Rider's patent, and guarantees their *enjoyment* against all infringers.

Now there are three objections to this guarantee, assuming the responsibility of the guarantors to be good.

The *first* is, that Rider does not guarantee purchasers against a recovery of damages by Goodyear, or against an injunction.

The *second* is, that Mr. Rider does not agree to pay or bear any part of the expenses of the litigation with Goodyear.

The *third* is, that Rider's patent is of no validity or value, and that as good an article can be made *without* infringing Rider's patent as *by* infringing it. The consideration of this last objection will be the subject of another communication.

In regard to the responsibility of the stockholders in Mr. Rider's Company, it seems they make notes, and, as he says, they pay them; but how long they will continue to do so under the burdens which they have already assumed, and with the long and expensive litigation which Mr. Rider is preparing for them, and for which they are *personally* and *individually* liable, may well be doubted. Their names Mr. Rider has not published. Why not? If there is no truth in our statements, or any foundation for our charges, and the public are satisfied with Mr. Rider's defence, the publication of their names will not injure their credit. But if there is any truth in our statements, and the public believe our charges have been proved, then their credit, we admit, will be impaired; and if Mr. Rider keeps the stockholders of his Company in his web, as long as he insinuates he shall, although they may keep on *making* notes, a time will come when they will stop *paying* them.

For who does not see that they are miserable dupes? Who does not see the folly and absurdity of paying money to Mr. Rider for the privilege of disputing the validity of Goodyear's patent at *their own* expense? Who does not see that, while Mr. Rider is *benefited* by sales of this *stock* in *any event*, the purchasers of the stock in *any event* must *lose?*

Lose, if Goodyear's patent is destroyed, because thereby a *better* business than their own (and it is yet to be proved that there is any profit in the manufacture of Vulcanized Gutta Percha) will be thrown open to the public; lose, if they should succeed in their claim to a right to use Goodyear's process. For then *the public* will have the right to manufacture Vulcanized Gutta Percha, and all that has been paid to Mr. Rider for his patent will be lost, besides the expenses of the litigation.

Do they understand this, or can it be that these stockholders were induced to purchase the stock under the belief that Rider had a patent for the exclusive right to make Vulcanized Gutta Percha?

Has Mr. Rider made any such representation? If he has, then they can recover back the money which they have paid for the stock, for the Patent Office refused to grant John Rider a patent for Vulcanized Gutta Percha, as they had refused others long before. When Goodyear's patent is out of the way, anybody and everybody can make Vulcanized Gutta Percha, if the business should ever be worth following. And if the stockholders in Mr. Rider's Company ever had the idea, that as good Vulcanized Gutta Percha as can be made, cannot be made without interfering with Rider's patent, the sooner they make the investigation the better for their credit as well as their purses.

WILLIAM JUDSON,
Attorney for Charles Goodyear.

JUDSON'S, No. 4.

India Rubber, Gutta Percha, &c.

Mr. Rider, instead of answering our article, republishes the same article which we had answered, in which he labored to show that India Rubber and Gutta Percha are not the same or identical. We had for argument's sake *admitted* this to be true, but insinuated that it was admitting a good deal, considering that Dr. Page treats of Gutta Percha as a "modification of caoutchouc;" that Professor Silliman says, "the chemical relations of Gutta Percha are almost identical with those of caoutchouc;" that the analyses of Soubeirain and Faraday gave for Gutta Percha, carbon 87 8-10, hydrogen 12 2-10, and caoutchouc, carbon 87 2-10, hydrogen 12 8-10; and that manufacturers themselves had always erred as to their identity, as Rider himself in his specification states, in these words:—"There has been an erroneous conception that *Gutta Percha* is *identical* in constitution and character with *Gum Elastic*, and that every operation in the process of vulcanizing the last named material might be applied to the treatment of *Gutta Percha*."

But we proceeded on the *admission* that the two substances were *not* the same or identical, and laid down the following propositions, which Mr. Rider has not even *attempted* to answer, and cannot answer.

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Second. That if Rider has added something to Goodyear's patented process of vulcanization in vulcanizing Gutta Percha, and procured a patent for it, he does not thereby acquire a right to use Goodyear's process.

Third. That admitting all that Mr. Rider *now* contends for, he is *liable as an infringer*, because it is enough that the substances are analogous, and the Patent Office, we affirmed, had decided this very point on the application of Rider for this very patent.

The first proposition is not denied. The second is the statement of a familiar principle which no one will dispute. But its application to this case is denied, because Mr.

Rider says India Rubber and Gutta Percha are not the same, or identical, which amounts to the same thing as a denial of the legal principle established by the Commissioner of Patents in this very case, that it is an infringement of Goodyear's patented process for vulcanizing Gutta Percha, which was the third proposition.

Mr. Rider does not deny that the Commissioner of Patents made such a decision, but cites the opinions of some *chemists* that the application of Goodyear's process to Gutta Percha would be no infringement—to use the words of one of them: "for the reason that Gutta Percha is not India Rubber." But, according to the decision of the Patent Office, the appropriate tribunal to settle such questions—it is enough that the substances are analogous; and such undoubtedly, is sound law.

Mr. Rider intimates that he shall dispute the validity of Goodyear's patent.

Mr. Rider in this betrays his weakness. The opinions of *chemists* on questions of *law* before a *legal tribunal*, may do for the *newspapers*, but hardly for the *Court*.

The question of infringement on Goodyear's patented process is not quite so clear, then, that Mr. Rider is willing to rest his defence on it; but he means to deny that Goodyear was really the inventor of it; and perhaps he means to swear that he himself was; but a consideration of the fact, that we have the affidavits of Mr. William Rider and his brothers, in which all of them swear that Goodyear was the inventor of the vulcanizing process, dispels all apprehenions on our part that Mr. Rider will *now* swear to the contrary, or attempt to procure testimony to prove the opposite of what he has sworn he knows was the truth and the fact, as he intimates he will do. And if our reminding him of this—which he had probably forgotten when he made his threat—has saved him from the danger and disgrace to which he was exposed, he owes us some service.

But what a flattering prospect does Mr. Rider hold out to the stockholders of his Company! A renewal of a nine years' controversy, which has exhausted the resources of Mr. Day and his friends—a controversy which has been carried on with an energy and perseverance, and a lavish expenditure, without a parallel in this country!!

But do they know what John Rider *claims* to be his invention, or that he is the *inventor* of *what* he claims?

Do they know that John Rider, in his application for this patent, swore that he was the inventor of *one* thing, but procured a patent for an entirely *different* thing? We venture to say that not one of these stockholders knows, or has ever been correctly informed.

In regard to the responsibilities of these stockholders, it seems they make notes, and, as he says, they pay them; and how long they will continue to do so under the burdens which they have already assumed, and with the long and expensive litigation which Mr. Rider is preparing for them, may well be doubted. Their names he has not published. Why not? If there is no truth in our statements, and the public are satisfied with Mr. Rider's defence, the publication of their names will not injure their credit. But if the public believe our charges, their credit we admit, will be impaired; and if Mr. Rider keeps the stockholders of his Company in his web as long as he insinuates he shall, although they may keep on *making* notes, a time will come when they will stop *paying* them.

For who does not see that they are miserable dupes? Who does not see the folly and absurdity of paying money to Mr. Rider for the privilege of disputing the validity of Goodyear's patent at *their own* expense? Who does not see that, while Mr. Rider is *benefited* by sales of this *stock* in *any event*, the purchasers of the stock in *any event* must *lose*?—lose, if Goodyear's patent is destroyed, because thereby a *better* business will be

thrown open to the public—lose, if they should succeed in their claim to a right to use Goodyear's process—for then *the public* will manufacture vulcanized Gutta Percha, if the business, as yet worthless, should ever be worth following.

Do they understand this, or can it be that these stockholders were induced to purchase the stock under the belief that Rider had a patent for the right to make vulcanized Gutta Percha?

Has Mr. Rider made any such representation? If he has, then they can recover back the money which they have paid for the stock; for the Patent Office refused to grant John Rider a patent for vulanized Gutta Percha, as they had refused others long before his application.

The facts in this case are matters of *record*. No one can read them without a feeling of indignation that so gross an imposition should have been attempted, and that there should be found a man in this community to justify or excuse it. We have published the facts in a pamphlet, which may be had gratuitously at the store of W. H. ARTHUR & Co., No. 39 Nassau-st., New York.

WILLIAM JUDSON, Attorney for Charles Goodyear.

RIDER'S REPLY TO JUDSON'S, No. 3 AND 4.

Gutta Percha vs. India Rubber.

Mr. Judson, in his third newspaper communication, as well as in his rehash of the same in the Times of 19th instant, seems to feel slighted because I have not noticed him, and is quite chagrined at the turn his case is taking before the public, and also at the complete failure of his attempts to frighten our stockholders or the purchasers of our rights of manufacture.

Mr. Judson must have patience; his gratuitous advertisements have so increased our trade in Gutta Percha clothing and other goods, that we have been unable to supply the demand; but, we have now increased our hands to 150, and run our mill night and day, which we hope will enable us in future to supply orders more promptly, and have time to bestow more attention on Mr. Judson, the attorney of Charles Goodyear; but be that as it may, we promise him that he shall not be forgotten, but shall have *full justice done him*, sooner or later, if he will only have patience.

The incomparable advantages of Gutta Percha goods, over those composed of India Rubber, are rather too forcible and practical arguments for Mr. Judson to cope with; and he is now alarmed lest we intend to attack and destroy the patent granted to Goodyear. Though he may well fear the decisive judgment which the public are passing on his darling Rubber monopoly, in favor of Rider's patent Gutta Percha fabrics, he need not fear any attack from us, on his pet patent, unless forced to do so in self defense. It would be a pity to destroy the valid appearance which has been, at so large an expense, (as Judson says,) thrown around the Goodyear patent; besides, if Goodyear is not the real inventor of the process of vulcanizing Rubber, as stated in his patent, he is yet entitled to great praise for his indefatigable perseverance, in combining the skill and ingenuity of others so as to make them appear his own. Then, again, Goodyear is largely indebted to the subscriber and his brothers for advances, to a large amount, made by them, when he was legally pursued, under the fear of being devoured by his attorney, the payment of which would be more doubtful than it now is, if his patent should have another trial applied to it.

Mr. Judson, the attorney of Charles Goodyear, should have no fear of our mistaking his

position and legal capabilities; but the public may not be so well posted up; therefore, that his learned disquisitions on patent matters, may not be misunderstood, it is proper to say, that his masterly management regarding the evidence used in the case of Goodyear vs. Day, entitles him to a higher seat among certain practitioners, for his untiring energy in collecting, classifying, and keeping in line so many years, at such an expense, some of the testimony used on that trial; but the least said in detail about this matter, the better for Goodyear's patent; therefore, we will only add, what has often been said to Goodyear, and as often admitted by him to be true, that Mr. Judson is almost solely entitled to the credit of defeating Day, and that, without his *peculiar legal aid* in any future controversy, the patent could not probably be sustained a moment. This, I presume, the combination will not dispute.

Notwithstanding the large amount of *fog, legal quirks and humbug*, with which Judson has enveloped his remarks, he now admits my assertions to be true, that is, that Gutta Percha and India Rubber are very distinct and dissimilar materials; and now, if, in as honest a moment, he will admit the undeniable fact, that Gutta Percha fabrics, made under Rider's patent, are not only very different in their properties, from those made of India Rubber under Goodyear's patent, but are better in every respect, being cheaper, more durable, better fitted for all climates, not liable to melt and stick, free from unpleasant smell, as well as being free from the other objections to Rubber—the public will then, we think, be in possession of all the facts necessary to the formation of all the judgment they care to form in the premises. The question in which they are chiefly interested, is, where they can get the cheapest and best water-proof goods, which they are now fast finding out.

The nice questions of patent law, they will be quite content to leave to the decision of those tribunals which have been constituted for that purpose.

Mr. Judson will be compelled to adopt some other mode, if he wishes to frighten our stockholders, than calling them "miserable dupes," irresponsible persons, &c., or than threatening them with prosecution for doing what his own witnesses prove they have a right to do, viz.: make Gutta Percha fabrics which are very different from and in all respects far superior to fabrics made from India Rubber. Mr. Judson makes a long story about the rejection of Rider's application for his patent, and very willingly forgets to tell the public, that after *three* unaccountable rejections, amidst an opposition that Mr. Judson may know something of, the Examiner was induced to hear the case fully; and was so thoroughly convinced by a comparative analysis of Gutta Percha and India Rubber, made by the late Professor Walter R. Johnson, of Washington, D. C., that the patent was cheerfully granted without an appeal, but simply on its merits.

Z. C. Robbins, Esq., who was employed with the late Professor Walter R. Johnson, in the application for Riders patent, in a letter advising him of its being granted, says:—"I think it was a fortunate circumstance for you, that your application for a patent was at first rejected, and again, and again rejected; for, after such rejections, I have strengthened the specification and claims. And now, in the shape in which the specification and claims stand, it is not in the power of human ingenuity to get over, or under, or around them, or in any way make use of your invention without a broad and palpable infringement of your patent. Unless I am greatly deceived, this will prove one of the most valuable patents that has ever been granted. I was informed at the Patent Office to-day that it was regarded as an extraordinary case for a patent to be issued after so many positive rejections."

With a just cause, a "*nine year's controversy*" has no terrors; and should Mr. Jud-

son sue our Company (which he says he never will do) it will not be found wanting in courage, in a good and impregnable defense, or in the sinews of war, even for twice nine years; and to sue our licensees will be considered the same as an attack upon us; if he does not believe it, and has any idea that we are infringing on the Goodyear patent, the courts are open to him, and he had better save time by sueing, instead of cudgeling his brains so hard for the most ingenious mode of misleading public opinion.

As for Mr. Judson's propositions, put forth under such a solemn visage and air of wisdom, that the stockholders of a corporation could be, even in the case of an infringement by the corporate company, of which they were members, personally and individually liable for such infringement, it is simply ridiculous. No exercise of wit on the part of Judson, could have excited the risibilities of lawyers any more, than has his solemn announcement of such an absurdity.

Mr. Judson cites two chemical authorities to prove the correctness of his position, and when shown by those authorities that his witnesses are against him, he comes out with the assertion that *such testimony will be of no use* in "*the appropriate tribunal to settle such questions.*" Having invoked such an authority, he is bound to abide by it; beside, the question of the sameness of two materials, is not a legal question, but a question of science and fact.

Mr. Judson, in his defense of Goodyear's patent, says, "We have the affidavit of Mr. William Rider and Brothers, in which all of them swear that Goodyear was the inventor of the vulcanizing process." Judson will have to brush the dust off from a good many documents before he finds any such affidavit of mine; none such, to my knowledge, has ever been made by me. The undersigned, several years ago, did make an affidavit regarding his transaction with and advances to Goodyear, but never has said that Goodyear was the inventor; but that is of no consequence; for if he should in self defense be obliged to undertake to break up Goodyear's patent, it will be done with testimony that even Mr. Judson will not dispute.

Mr. Judson is very much troubled about the guarantee this Company proposes to give to those who purchase rights to manufacture under Rider's patent; but leaves us in doubt which side he is on, whether for or against the Company. However, I do not suppose it makes much difference which side he takes, as a lawyer's opinion, given gratuitously, is not generally of much account. But as the Company are willing to give a guarantee that purchasers are willing to take, without consulting Mr Judson in the premises, I hope he will survive the anxiety that seems to agitate him on this subject.

Mr. Judson thinks "as good an article can be made without infringing Rider's patent, as by infringing it." We think otherwise; but, we do not pretend that Rider's patent covers every improvement that ever was, or ever can be made in the manufacture of Gutta Percha, (we leave such universality of claim to Goodyear and his attorney.) but, thus far Mr. Judson knows, that the only vulcanized Gutta Percha goods now before the public were made by this Company; he also knows that Goodyear, and others of the Rubber combination, have spent months and years in trying to vulcanize Gutta Percha without being able to accomplish anything desirable. It is equally well known, that when Rider's Patent Vulcanized Gutta Percha Fabrics were first shown to the public, the whole Rubber combination, Goodyear included, pronounced them to be a deception, and said they *must* be composed of all, or nearly all, India Rubber; for, they said, such goods *could not* be produced from Gutta Percha alone. Some of them were so sure there was deception practiced by the infusion of large quanties of Rubber, that they offered to bet considerable

sums on it; and no one then pretended that Gutta Percha and India Rubber were at al alike, or that the vulcanizing of Gutta Percha could be construed into an infringement of any process for vulcanizing India Rubber. But since it has been really found that, under Rider's patent, Gutta Percha may be rendered flexible and elastic, and that Vulcanized Gutta Percha Fabrics made under said patent are far superior to, and fast superceding, India Rubber, the combination has become alarmed; hence, Mr. Judson's unwarrantable and libellous attack upon this Company and its stockholders, in the newspapers.

But it will not have the effect he desires. The facts are before the public, and Rubber will most certainly have to give way to Gutta Percha, of which all can be satisfied who will examine the Clothing, Car Springs, Belting, Steam Packing, Shoes and other goods, made of Rider's Patent Vulcanized Gutta Percha, at the warehouse of the Company, 80 Cedar street or at the Crystal Palace, where the goods may be handled, instead of being under lock and key, as the Rubber goods are.

That the public may understand how far Mr Judson's mystified threats, legal innuendoes, and libellous assertions, have effected those treating with this Company for rights of manufacture under Rider's patent, it is proper for me to say, the right to make *Breast Pumps, Syringes, Balls, Dolls and other toys*, has been sold, and a Company formed of highly respectable and *responsible* gentlemen, which will soon commence operations. The rights to make *Pencil and Ink Erasures*, as well as *Combs*, have been sold; the right to make Steam Packing and Machine Banding is negotiated and will be carried on by a large and rich company: and negotiations are now going on for several other rights. The right to make Gutta Percha Shoes and Boots, which presents a very large and profitable field for business, will soon be ready for sale, either to one set of men, or under several concurrent licenses under the patent.

Mr. Judson has just published what he calls a "Review of John Rider's Gutta Percha Patent," by which he attempts to cut his own nose off; but we shall prevent him from doing so. He says they may be had gratuitously at the store of W. H. Arthur & Co., 39 Nassau street. We advise all our friends, as well as the public in general, to secure a copy of this work, and as proof of our sincerity in this advice, we would say, if Mr. Judson will furnish this Company with ten thousand copies of this book in sheets, we will have them bound, with that part of the documents in the Patent Office, which he so honestly forgot to review, and which, we think, will explain the case so the public can disengage the facts from Mr. Judson's winding ways. These ten thousand copies, with the documents, and our remarks, we agree to bind together and give them a large circulation without further cost to Mr. Judson.

With these remarks I will turn Mr. Judson over for the present, to L. R. Marsh, Esq., the attorney of our Company who will be found ready and willing to meet him in the public prints, or under legal documents.

WILLIAM RIDER, President,
N. A. G. P. Co.

EXTRACTS AND OPINIONS OF THE PRESS.

From the New York Daily Times—June 16, 1853.

GUTTA PERCHA.—The ingenuity of man in appropriating the whole range of animal, mineral and vegetable substances to the advancement of his comfort, is nowhere more wondrously exhibited than in his conversion of the sap of trees to a thousand uses of life. The innumerable textures to which the gums of the India Rubber and Gutta Percha forests are and may be converted, are, perhaps, the most extraordinary results of his invention. It is not difficult to remember the time when the only specimens of India Rubber seen in our country, were a few bottles in which quicksilver had been imported, and which were then cut up to be devoted to the erasement of pencil-marks. The great object of its creation was supposed to be the correction of mistakes of the pencil. Then, through long years, the idea that this material was susceptible of numerous other applications, fermented in the brains of ingenious men, absorbing their thoughts in the day, and flitting in fantastic forms through their dreams at night, leading its enthusiasts through valleys of poverty and over mountains of trial and disappointment, till, at last, the great discovery broke on the mind of the inventor of the process, and has since materially contributed to the comfort of man. Though the business is of such recent origin, yet there are some twenty-two establishments working under a single patent, with an invested capital of about two millions and a half of dollars; and the tariffs which the inventor has reserved, now amount to over one hundred and fifty thousand dollars per annum. The sales of Rubber goods in this country for the last year, it is computed, exceeded the sum of five millions of dollars.

While the India Rubber trade was thus dawning and perfecting, the great original forests of Malacca and Borneo, which had so long shaded the peninsula and island, held in their rich trunks a new material, unknown to the world, but which was destined to become of incalculable value. The trees were of a different order from the India Rubber, and their product distinct and dissimilar. Dr. Montgomerie, an assistant surgeon at Singapore, discovered in the hands of a native the handle of a wood-chopper, of such singular material, that it awakened his attention, and on inquiry he found it to have been made of the gum of this strange tree—becoming plastic when dipped in hot water, and, when cold, regaining its original stiffness. This was only ten years ago, but in this short period, the exudations of these dense forests have assumed, more especially in England, innumerable forms. This gum has qualities entirely differing from the sap of the India Rubber. It cannot be worn out. It can be melted and remelted, and repeatedly remoulded, without changing its properties or losing its virtue. It is lighter than Rubber, possesses certain repellent properties unknown to that material, is non-elastic, much harder and of finer grain, and of superior density and toughness. Cold water does not affect it, it is a non-conductor of heat and electricity, disregards alkalies and acids, laughs at frost,

and displays certain important acoustic qualities. But there were great difficulties in the way of its application to many of the uses of which the Rubber was capable. Its stiffness and non-elasticity, and its disposition to melt under a high degree of heat, prevented the accomplishment of anything else than the mere conversion of the raw material into different shapes; having great hardness and no pliability. Eminent chemists, through several years, toiled in vain for the secret they believed to exist, which should endow the Percha with the elastic qualities of Vulcanized Rubber, without depriving it of its other superior properties. But it remained for the Messrs. Riders, of our own city, to unlock the hidden secret, and to discover the art of superadding pliability, in different degrees, to the strange capabilities this wonderful gum already possessed. The range of its uses is thus indefinitely enlarged. It were easy to enumerate a thousand applications; and new ones are suggested every day.

It carries the Croton through a tube of a thousand feet in length, from New York to Blackwell's Island, and does not mingle with the water any of the hurtful material which metallic pipes impart. Beneath the waves of the British channel, it sheathes the uncorroded wires, and brings Paris and London within the limits of a watch-tick. Its tubes remain buried in damp ground, without injury, for years. By attaching one end of a tube to a gas pipe, light may be conveyed by hand to every portion of a building. It has especial qualities for the transmission of sound. It conveys the voice to the ear of the deaf, enables it to speak to the engineer through the roar of a railway train, carries domestic messages to different parts of the house, opens the closed ears of a congregation to the words of the minister, and faithfully transmits the slightest whisper to the miner in the lowest depths. For bleaching and chemical purposes, its resistance to acids, makes it particularly available. For pump barrels, syphons, and suction pipes, it is growing into extensive use. The recent discoveries of our townsmen now make it an absolute necessity, for boots and shoes, clothing, car springs, belting, carriage cloths, and a whole army of appliances. A thin coating, spread on the finest silk, forms a fabric, light, beautiful and glossy, dark or light, and perfectly water-proof. While it may receive the elasticity of India Rubber, it has the advantage of assuming the stiffness and density of bone. In opposition to every known law of physics, it *contracts* with heat. When spread on cloth, a given quantity covers a half more surface than the same amount of India Rubber, and presents a natural polish which Rubber can only receive by a coat of varnish.

We have hastily enumerated a few of the manifold uses of which this ductile secretion is capable. It is singular indeed, that there should circulate in the vein of the primeval forests of the Malayan peninsula and the neighboring isles, a liquid juice, so long a stranger to the civilized world, possessing such extraordinary virtues, in the short period of ten years entering so largely and variously into the service of man, and destined to become his servant in a greater variety of forms than any other material yet discovered.

From the New York Day Book—Oct. 17, 1853.

INDIA RUBBER COMBINATION VS. THE NORTH AMERICAN GUTTA PERCHA COMPANY, &c. The name of Charles Goodyear, who, we believe, has about as much interest in the question as the man in the moon, has been attached to a libellous and silly attack upon Mr. William Rider, President of the North American Gutta Percha Company, and upon what bids fair to be one of the most valuable patents ever granted in this country. The motive of this attack is well known to all those engaged in the Rubber trade; and lest it may not be understood in other quarters, it is well to call the attention of the public to a few facts.

It is believed that Goodyear, who has been in Europe for a year past, has given this attack no countenance; certainly his connexions with Mr. Rider, in past years, have

given him no cause for it; but be that as it may, Mr. Rider is too well known in this community to have such communications injure him; and as for the Company they should care nothing about it, only as a medium for advertising their splendid fabrics. Looking back a few years, and the entire Rubber trade of the United States acknowledge their indebtedness to Messrs. W. Rider and Brother for the most valuable discoveries, which saved the business from entire overthrow, and by which means those who had been misled into the belief that the process patented by Mr. Charles Goodyear could be made profitable, were extricated from difficulties, and their investments rendered profitable.

After expending much money, and toiling a long time, the Messrs. Rider, Brothers, taught Goodyear and those who had become involved with him, how to make vulcanized and merchantable Rubber goods; and until this moment, the honor and credit of the production, has been given to Charles Goodyear, while hundreds of thousands of dollars have been pocketed by his assignees, in the manufacture of such goods. Some three years since the Messrs. Riders turned their attention to Gutta Percha, and after a series of novel experiments, of a character wholly original, the astounding discovery was made by Mr. John Rider, of a process for vulcanizing, by which Gutta Percha was made permanently elastic and flexible, like India Rubber, contrary to the conclusion of Goodyear and all other experimenters both in this country and Europe.

As this magnificent business opened to the world, by this great discovery, required a much larger amount of money for its development and introduction, than the Riders had at command, they associated themselves with several other gentlemen, and formed the North American Gutta Percha Company, to which the patent for the discovery was transferred exclusively.

At the outset, the Messrs. Riders were met with vexatious intermeddling with their claims in the Patent Office, attended with the most unheard of conduct; and from that moment to the present, the same parties, prompted by jealousy and their interest in India Rubber, have resorted to a system of misrepresentations and slander.

Regardless of all opposition, this Company have quietly pushed forward their manufacture of Gutta Percha fabrics, under their patent; and having at last demonstrated the fact upon a large scale, and introduced their goods to the public with most brilliant success, proving, as they have, that Gutta Percha can be so treated and manufactured, as to possess all the desirable, and even better qualities than the very best vulcanized India Rubber. Hence the cause of this attack is easily explained. Raw Gutta Percha does not cost half the price of raw India Rubber. The expense of working it, although quite different, is but little, if any more, and the goods made of Gutta Percha, under Rider's patent, are much lighter, less offensive in smell, not liable to decompose and become sticky, and far superior in style and finish. These facts are not only well known by the Rubber combination, but what is worse for the combination, the immense sales of this Company, with entire satisfaction to the purchasers, seems to designate a day not far distant, when the present enormous consumption of Rubber goods will be superceded by those made of Gutta Percha, which is the main secret of this unfair attack.

The proposition so cunningly thrown out, that Rider's patent for working Gutta Percha is an invasion of Goodyear's for working India Rubber, is simply ridiculous.

It is well known by the whole Rubber combination, that Goodyear used every effort in his power, for a long time, to discover a process by which Gutta Percha could be made elastic and pliable, and finally gave it up as impossible; it is also equally well known that the Rubber fraternity have, from the time Rider's patent was issued, to the present, on all occasions, openly and plainly asserted, that the idea of making elastic and flexible Gutta Percha fabrics, was preposterous, for it could not be done; and now since it has been done, and the fabrics purchased by the public with the most flattering encomiums,

this combination comes forward, under the name of Charles Goodyear, and attempts to continue a system of humbug which the public had quite enough of during the controversy of Goodyear and Day.

If the Riders, or the North American Gutta Percha Company, are really unlawfully interfering with the legal rights of this Rubber combination, the law of the land is open to them, and through which they ought to seek, and through which they had better seek, than through slander and humbug. The object of this article is to place the parties properly before the public, and give a statement of the facts; and now we leave the public to post up for themselves, either at the warehouse of the North American Gutta Percha Company, 60 Cedar street, or at the Rubber stores about the city.

From the New York Daily Express—Nov. 3, 1853.

GUTTA PERCHA.—The accession of any new material, to the benefit of commerce, and the comfort and use of our race—capable of illimitable application, is an advent of sufficient importance to justify especial reference. It will appear, by the communication of Mr. William Rider, in this day's Express, that Gutta Percha—the use of which has been hitherto restricted by its non-elasticity, rigidity, and too great susceptibility to heat—can now, under the patent of Mr. Rider, owned by the North American Gutta Percha Company, be endowed with permanent elasticity and flexibility, rendered unsusceptible to heat and cold, and applied to all the purposes for which India Rubber has heretofore enjoyed the exclusive monopoly. Few inventions more strikingly illustrate the ingenuity of man.

From the Scientific American—New York, October 23, 1853.

REVOLUTION IN VULCANIZED FABRICS.—Who has not heard of the "Great India Rubber Case,"—its interminable and apparently unexterminable character. There is a prospect, however, of its annihilation—not by law, that is impossible, but by an opponent in the form of a new discovery, whereby Gutta Percha is rendered flexible and capable of enduring as great a heat as vulcanized India Rubber, adapted to all the same purposes, and made into similar articles. In the Machine Room of the Crystal Palace, various articles of the vulcanized Gutta Percha are exhibited—such as coats, car springs, packing, &c. They have the appearance of prepared India Rubber goods, are said to be more tenacious, not so liable to decompose, and fifty per cent. cheaper. There is a case of Goodyear's prepared India Rubber goods, beside those of the Gutta Percha, and for variety and extent of application far exceed the latter: thus there are India Rubber canes, knife handles, coats, shoes, balls, fancy ornaments, and hundred other things. The manufacturers of Gutta Percha say they can make similar articles, but have not had time to manufacture such a variety yet. An account of this new discovery will no doubt be interesting to all our readers. The inventor is John Rider of this city; he secured a patent for the process on the first of June last year.

Gutta Percha, is a gummy substance discovered only seven years ago in the East Indies, and the first description of it published in our country, appeared in the columns of the "Scientific American." It is obtained from the juice of a tree, and comes here combined with many woody impurities, two rough lumps of which are shown in the Crystal Palace. Its qualities, as known heretofore, were its sensitiveness to heat at 80° or 100° Fah., whereby it was rendered plastic, and could be moulded into any form, and again become hard as a bone at 60° Fah. Mr. Rider's process consists in so treating it that it can still be moulded into any form, spread upon goods to make them water-proof, made

elastic, and finally rendered capable of standing a heat of over 300° Fah., without becoming soft.

The process is as follows:—all the solid woody fibre is first removed from the Gutta Percha, and then it is submitted to heat in a proper vessel to about 400° Fah., for from two to four hours, until all the volatile matters are expelled. When so heated it is in the state of a thin dough. The Gutta Percha, however, may have this heat applied to it either by hot rollers, hot air or steam, and it is the expulsion of these volatile matters from it, which forms the basis of the new discovery. To every eight pounds of Gutta Percha so prepared, three pounds of the hyposulphate of lead or zinc are added and mixed thoroughly by passing them through a series of heated metallic rolls like those for mixing sulphur and caoutchouc, only for Gutta Percha the rolls need not be so hot by 30° Fah. To make heavier goods, about 4 lbs. of Paris white and one pound of manganese oxyde may be added to the mixture. When thoroughly incorporated, the compound is to be spread upon cloth into sheets, or moulded into any shape, but it is still liable to be affected by solvents and changes of climate, equally as much as native Gutta Percha. To render it permanently elastic at all temperatures, the goods are submitted to the curing operation. The operation is analogus to that of curing India Rubber goods, with some exceptions. The articles are placed in a room or vessel as nearly air-tight as possible, and are then subjected to a heat of 280° or 320° Fah. This is a higher heat than that used for curing India Rubber; the time required for curing, varies from two to ten hours, according to the massiveness of the articles—the thicker requires the longer time. Articles liable to come in contact with one another during the curing process, should be dusted over with flour or non-adhering substance. After the curing operation is completed, the goods are withdrawn, washed clean with water, dried, and are then ready for use. If required to be entirely freed from odor, instead of being merely washed with water, they must be boiled in a solution of potash, then well washed in water, and dried in the sun. The hyposulphates herein mentioned, as mixed with the Gutta Percha, are sometimes advantageously employed in combination with metallic sulphurets for metallo thyarizing the Gutta Percha. In such cases, perference is given to artificial sulphurets resulting from precipitation, on account of the fineness of the precipitates—they mix better in such a state of subdivision.

The preliminary preparation of Gutta Percha described, for the after processes, would destroy India Rubber. As the Gutta Percha softens before vulcanization at a lower temperature than India Rubber, it is more favorable for mixing with the other ingredients, as it does not adhere so readily to the mixing heated rollers. As it requires a higher heat than India Rubber in the curing process, so as to render a complete union of vulcanizing materials with it; the goods so made are said to withstand a far higher heat than those of vulcanized India Rubber.

That the discovery is a valuable one, no one can doubt who views the goods made by it. If vulcanized Gutta Percha goods can be made, at one half the price of those made from India Rubber, and equally as good, a great benefit has been conferred upon our country by this invention.

From the Scientific American—New York, December 3, 1853.

Bandying about Inventions.—Interested and selfish parties have done, and are now doing, an immense amount of mischief by dragging their business quarrels before the public, in the form of crimination and recrimination respecting the pirating and use of certain inventions and discoveries. In an article published by us recently, on page 21, we alluded to the cards which had appeared in certain papers relating to sewing machines; but such machines are as nothing in comparison with the great monster of news-

paper card controversy, "Vulcanized India Rubber." As sulphur is the principal ingredient, and heat the agent in effecting *vulcanizing* changes in this material, it also appears as if a spirit from the hot brimstone den of old Satan himself were infused throughout everything connected with its manufacture and management.

On page 45 we published a description of J. Rider's process, as described in his patent, for the preparation and manufacture of fabrics from "Gutta Percha," which goods resemble and equal those heretofore made from India Rubber. With the inventor we never had any acquantance, or conversation; we presented the subject and much useful information in connection with it, as something new and important to our readers in the field of inventive progress. The discovery of a method of preparing Gutta Percha—this new and singular oriental product—whereby it can be so treated as to make excellent and peculiar fabrics, we considered—as we now do—a very valuable addition to the manufacturing interests of our country. Our implied opinion, in the article referred to, was, "that *Gutta Percha*, chemically, is not an analogue of caoutchouc;" this opinion, however, was not broadly stated. Since that period some of the daily papers, in our city, have actually groaned day after day, with long paid articles on the subject. In all of these inflictive documents on the one side, W. Judson, attorney for Charles Goodyear, charges J. Rider with infringing the "vulcanizing India Rubber patent," by asserting that Gutta Percha is analogous to caoutchouc, and that the process for manufacturing the former substance is embraced in the patent of Goodyear. The cards of the Goodyear side of the question are couched in terms of an exceedingly *sulphurous* character; and to these Rider has replied in language not less *sulphuric*. On paper, these two gentlemen exhibit an appearance like that of the famous Killkenny cats: they have worried one another until nothing is left but their vertebral appendages. No patentee has any moral right to act as the attacking party in this case has done. If that party honestly believes that others are infringing his patent, no one knows better than the author of those furious newspaper articles, that the only way of obtaining redress is from our courts of justice—and that way is broad and open before him. Nay, we go further than this; we assert, that the lawyer of a patentee, who does not promptly seek proper redress for his client, through the proper channel, does not do his duty to his profession, or the interest of his client. We cannot but censure the conduct of any lawyer who, instead of enforcing the rights of his client, and seeking redress before the proper tribunals, inflicts the public ear with *ex parte* statements and onesided arguments. By such conduct, and the frequent use of the words "*invention* and *infringing the patent*," in the articles published, the public who know nothing about the real causes, or the merits of the controversy, are led to believe that the spirit of the bottomless pit is not only part and parcel of these sulphuretted patents, but other patents also. The very idea of a patentee, or the lawyer of a patentee, failing to seek redress promptly for his asserted wrongs, by the only legal means whereby redress can be obtained, and instead thereof, paying large sums of money for abusive newspaper articles, carries, with it a conviction that there is something morally wrong about the matter. The best and the quickest way to settle such disputes, is to submit them to a jury of twelve intelligent American citizens. We do not want the public ear continually inflicted with quarrels about "patents new and patents old," when at the bottom of all, neither inventions nor patents, but certain manufacturer's interests, are the sole and ruling motives for strife. To those patent lawyers engaged in this controversy, we must apply a parodised couplet of old Hudibras,

"The lawyer drum of gum-elastic
They beat with pen instead of a stick."

To the public let us say, "heed not the cards published in our daily papers about patent quarrels: the authors of them have specific objects in view, best known to themselves; they know how and where to obtain redress, and their complaints deserve the censure and condemnation of all *honest* patentees."

From the Advocate and Register—Rahway, Nov. 18th, 1853.

Mr. Rider, the President of the North American Gutta Percha Company, (80 Cedar st., N. Y.,) than whom no man living is more thoroughly acquainted with the rise, progress, and complete history (up to this date) of Gutta Percha and India Rubber, with extensive manufacture in this country, has, latterly, become the object of much vituperation on the part of the great India Rubber combination—that combination which, during the last few years, has been so ingloriously engaged in prosecuting Horace H. Day, and which in its excess of infatuation is about grasping with a still abler champion of "equal rights" in the person of the worthy President of the North American Gutta Percha Company. From what we can ascertain, the corrupt oligarchy in question (should they insanely persist in carrying out against Mr. Rider the measures indicated in their recent movement) will find, in this gentleman, a "customer" of a calibre and address they little anticipate—one, in fact, whose thorough and exact knowledge of the matter in hand, will take them completely by surprise, eventually leaving them in that predicament of helplessness and contempt which they so justly deserve.

The subject of Gutta Percha and its concomitants, having become decidedly interesting to the generality of readers in this section, we propose, hereafter, to give such an account of it (in connection, of course, with the controversy now raging on the subject,) as will not be unacceptable to *our* readers.

From the United States Argus—New York, Dec. 3, 1853.

There is hardly one invention that is not superceded by another—a very clear proof that the *highest order* in any thing is not arrived at at once, but that perfection is only attained by degrees. There can be no greater proof of our position than in the case of *Gutta Percha.* When India Rubber became an article of clothing, etc., there was no idea but that the ultimatum had been arrived at. Not so, however; for hardly had this article got well into notoriety, than it was immediately superceded by Gutta Percha, because there were evident inconveniences in the former which the latter is free from.—Gutta Percha now stands pre-eminent, and Rider's Patent Vulcanized Gutta Percha is ahead of every thing in the line. Some of the great points which the Gutta Percha possesses over India Rubber, are the absence of all unpleasant smell, besides its pliability and elasticity, and its being impervious to fatty substances—while all climates are alike to it, and no change of place can alter it in the least, as it will not decompose or become sticky. Mr. William Rider deserves great credit for his ingenuity, tact, and ability in bringing this article to such perfection. The traveling community owe this gentleman a debt of gratitude—more especially those whose destiny is California or Oregon. No one visiting these parts should go without a suit, and those who value their health will not fail to supply themselves with coats, cloaks, capes, pouches, reefing-jackets, overhauls, leggins, sou'westers, caps, camp-blankets, horse-covers, and all the necessary paraphernalia of life in California and Oregon. Nothing can exceed this article in the shape of a life-preserver. This is the *ultima thule*—the object of every man living—the *sine qua non* of our existence. Altogether, we advise all people—more especially travelers by sea or land, to call on Mr. W. Rider, 80 Cedar street, and see clothing made of Gutta Percha, not to be equalled in the world. If we had a friend whose destination was some distant clime, we would insist upon his arming himself with this new and useful costume, and he might live to thank us for our importunity. Remember, 80 Cedar st.

From the Advocate and Register—Rahway, N. J.

GUTTA PERCHA AND INDIA RUBBER CONTROVERSY.—We have thrice referred to this controversy in our columns, and take up our pen again on this subject. It seems that the Messrs. Riders have invented a new process, by which Gutta Percha is made elastic and pliable, without injuring the other invaluable properties of the native material; and that the Riders have sold their patent to a company of men of large capital, who have organized a Company, with a capital of *five hundred thousand dollars*. This Company have commenced their operations with great energy, and with a seeming determination to supercede any other water-proof articles ever offered to the public. Thus far the Company have produced goods which seem to astonish every body, (even the Rubber combination,) as will be seen by the great sales of the Company, even at the start of their business. The bare fact stated in the advertisements of this Company, that their goods *will not decompose, and have not the offensive smell* of Rubber goods, is sufficient alone to give this Company the lead in the line of water-proof clothing, &c. But the Company claim for their goods many other advantages over India Rubber, which their advertisements will show. These facts explain why the Rubber combination, under Mr. Judson, are attacking Mr. Rider and the North American Gutta Percha Company in the newspapers. And in subsequent articles, we propose to point out the true position of these parties in a legal view, by stating the difference between the patents of Charles Goodyear for working India Rubber, and the patent of John Rider for working Gutta Percha, as well as the difference between Gutta Percha and India Rubber—chemically, commercially, and mechanically; then our readers will not only be able to judge who are in the right in the controversy, but also of the quality of both fabrics—the last of which seems to be the most important for them to know.

From the New York Day Book—Nov 5, 1853.

GOODYEAR'S CLAIM TO GUTTA PERCHA.—The most absurd claim we ever knew one man set up to another man's rights, is that of Goodyear to Rider's patent for vulcanizing Gutta Percha. Not satisfied with the exclusive right to manufacture all sorts, kinds and qualities of India Rubber goods, he now, without the least shadow of right, reason or sense, sets up a claim to a patent for making Gutta Percha goods. He pretends that Gutta Percha is India Rubber, and India Rubber Gutta Percha. Who ever heard of such absurdity? Why, a man might as well pretend that turpentine from North Carolina pine, and sap from the sugar maple, were the same, and a right to make rosin included a right to make maple sugar. The greediness of this man Goodyear passes comprehension. He wants his patent-right to cover every thing in the heavens and under the heavens, on the earth and under the earth; everything that ever was thought or dreamed of, and all that has been, is, or will be invented. He has patented everything that looks like India Rubber—everything that feels like it, tastes like it, or smells like it. Every new shape, or twist, or turn that it takes, he calls an improvement, and petitions for a patent. In this way he keeps his patents lapping one on to the other, and running year after year perpetually.

We were in Washington when Mr. John Rider was trying to get his patent for vulcanizing Gutta Percha, and became acquainted with the efforts Goodyear was making to prevent him from obtaining it. He tried to make the Commissioners believe that Gutta Percha and India Rubber were one and the same thing. The Commissioners received his statement, and really went into a serious examination of the two materials, which are about as near alike as tar and potter's clay. The result was the discovery of

the truth, and that Mr. Goodyear was a *leetle* inclined to crooked ways. Not succeeding at the Patent Office in making Judies of the Commissioners, he now comes before the public, and, like the boys at school, asks the dear people to open their mouths and shut their eyes, and let him cram his nonsense down their throats. Like Bennett, he believes the public an ass, but we doubt very much if he finds any *one* person donkey enough to believe Gutta Percha is India Rubber.

From the State Gazette, Trenton, N. J.—Dec. 3, 1853.

ANOTHER ENTERPRIZE.—Our readers are already aware that a Company has been organized in this city, recently, under the General Manufacturing Law, for the purpose of manufacturing Gutta Percha into the various articles of use and ornament, of which it is susceptible.

The Company is composed of gentlemen of New York and this city. They have purchased the right to use Rider's Patent for Vulcanizing Gutta Percha, by which process the hard and stiff qualities of Gutta Percha become flexible, soft, and elastic, something similar to India Rubber.

We have lately visited the establishment of this Company. It is situated in Lamberton st., near the canal, and is quite extensive and conveniently arranged for business. The power will be furnished by a splendid thirty-five horse engine—from which source the heat used in vulcanizing the Gutta Percha and in warming the building, will be derived.

The other machinery—consisting of two mills for grinding or crushing the raw material, and a calendering machine, is from Bird & Weld's shops, and has been got up in superior style. This part of the machinery is as well adapted for working India Rubber as Gutta Percha. A snug machine shop for repairs is connected with the concern.

The establishment will go into active operation in a few days, and will employ a large number of hands—principally girls and lads. The process of manufacture will be light and pleasant, and well calculated for females; good wages can be made. The Company will start with the manufacture of toys—such as dolls, balls, teething rings, breast pumps, &c., for all which there is, we are told, a pressing demand. Indeed, a gentleman of New York, proposes to take $20,000 worth, as soon as that amount can be furnished by the Company. The profit in the manufacture of articles made of Gutta Percha, we understand, is greater than that of India Rubber—which must be enormous, judging from the rapid increase of the latter business, the law suits they have sustained, and the large profits paid to stockholders. At any rate, our good old city will participate in the profits, whether the dividends to those concerned be large or small. We wish, however, success to all who have means and enterprise enough to strike into new channels of trade—and who will conduct their business with due regard to the health and welfare of those who do the work.

From the Enquirer—Portsmouth, Ohio.

Some future Headly will write a history of the Wars of Commerce. One of its battles is now being fought. It is the deadly fray between Gutta Percha and India Rubber—two tough combatants. How we have glorified India Rubber, as one of the most wonderful of Nature's gifts! It *has* defects, and very sad ones. Pah! no olfactory ever got reconciled to its smell. Vulcanize it as much as you pleased, and it was too susceptible to changes of climate. Left in a warm place, it grew sticky, rotten and worthless. We never expected to find a substitute; but one has recently been found. Bountiful Nature has unthought-of treasures; and Science, unknown resources. William Rider

and Brothers, of this city, long engaged in the India Rubber manufacture, have discovered a mode of preparing Gutta Percha, which gives it all the pliability and elasticity of India Rubber, without its unpleasant and objectionable qualities. This may be safely ranked among the most wonderful discoveries of the age.—In effect it is equal to the Philosopher's stone. If it cannot turn lead into gold, it does convert Gutta Percha, which was little more than a natural curiosity, into one of the most beautiful and useful of known substances.

Well—but why the War? What is there to fight about? One would suppose that nothing was left, but to give suitable rewards and honors to the fortunate discoverer. So any sensible man would think—but do not forget the Wars of Commerce. "Our craft is in danger!" is an old cry, by no means forgotten. Millions are involved in the India Rubber interest; and it required time, patience, and a hard struggle, for Messrs. Riders to get a patent. Had they been poor men, they would have been crushed. At last, Truth and Science triumphed. The Commissioner of Patents was brought to a realizing sense of the fact, that Gutta Percha is not India Rubber; that the processes and results of their manufacture, are by no means identical; and that the Gutta Percha patent, by the very opposition, is made as strong as our laws can make it; and the whole world is made the richer, by the possession of a new element of industry, use, and luxury.

Still, India Rubber will not be driven out of the field without a bitter contest. Such men as Goodyear and Day do not "give up" so easily; and it is well for the newspapers they do not. After fighting with each other for years, and spending their thousands in the controversy, they will probably now unite against Gutta Percha; but, "the battle will not be to the strong" *smelling*. Gutta Percha has its adversary by the nose. The former can better endure the *heat* of the conflict. India Rubber will be *trodden under foot;* but people will clasp Gutta Percha to their breasts with "hooks of steel!"

From the Journal, Ballstown Spa, N. Y.—Dec. 20, 1853.

I remember to have written, some six years ago, an article descriptive of the manufacture and uses of India Rubber. I did not then think that that comparatively valuable article would be so soon entirely superceded by a substance, the merits of which were but beginning to be known by those engaged in testing its applicability to the various purposes for which Rubber is used. Gutta Percha is now throwing India Rubber into the shade. Rubber has had its day. It was a great discovery, and I am grateful for the benefits I have derived from it; and now that it is going out of date, I do not think it would be generous for me to dwell upon its defects. True, it smells bad, and gets sticky in warm weather; but it has often kept my feet dry—so peace to its ashes! India Rubber has made fortunes for hundred of manufacturers and dealers, who are now making up their minds to smaller incomes. Many of them are becoming interested in the Gutta Percha patents of Wm. Rider, and will no doubt make even more money in this way than they did in the Rubber trade. Rider is the real inventor of many of Goodyear's patents. He was with Goodyear many years, and only left him when, having made some experiments in Gutta Percha, he became convinced that it was bound, ultimately, to drive Rubber from the field, in many departments of industry, and to equal it in all the rest.

From the Ohio State Journal—Mt. Vernon, Dec. 13, 1853.

The interminable contest between Day and Goodyear, the rival caoutchouc or India Rubber manufacturers, still occupies the attention of the United States Courts, but the recent discovery of a means of applying Gutta Percha to the manufacture of clothing,

and many other articles which have heretofore been made of India Rubber, bids fair to lay both Day and Goodyear on the shelf. Gutta Percha has several advantages over India Rubber. In the first place, it is more durable; secondly, it is a non-conductor, and, when used in the form of clothing, protects the wearer from heat and cold as well as from the water; thirdly, and this is perhaps the most important advantage, it never becomes sticky, as India Rubber does, when exposed to too much heat or friction. For these reasons, Gutta Percha will probably soon supercede caoutchouc, for manufacturing purposes; thus affording a new and striking illustration of the changes which science is making in the commerce of the world.

Previous to 1844, the very name of Gutta Percha was unknown to the commerce of the civilized world. In that year, two hundred weight of it was shipped experimentally from Singapore to Europe. In the first four and a half years of the trade, 21,598 piculs of Gutta Percha, valued at $274,190, were shipped at Singapore, the whole of which was sent to England, with the exceptions of 15 piculs to Mauritus, 470 to the continent of Europe, and 922 to the United States. *Now*, the importation of this article is immense; and as its superiority for manufacturing purposes is discovered, the trade rapidly increases. At the factory of the North American Gutta Company, in this State, the various modifications of which this substance is susceptible, and the variety of articles into which it is manufactured, is interestingly demonstrated.

From the Expounder—Marshall, Michigan, Dec. 15, 1853.

There is a libel suit just going on, brought by Edmund P. Fry against James Gordon Bennett, to recover damages for several alleged libels which appeared in the New York Herald, some years since, when the plaintiff was manager of the Astor-place Opera House. The damages claimed are large; and it is thought that, should a judgment be obtained in the Superior Court, the case will be carried up. This case bids fair to become like the almost never-ending cases of Morse vs. O'Reilly, and of Goodyear vs. Day. The Telegraph cases, however, are nearly settled, I believe—but not so with the India Rubber war. When Goodyear and Day will see it to be for their mutual interests to compromise their difficulties, and not squander fortunes in court and counsel fees, I cannot say—but each seems to be determined to carry on the war, until one or both are exhausted. In the mean time, they not only have formidable rivals in each other, but a still more formidable one has sprung up in the Gutta Percha discovery, which, from the fact of its possessing all of the desirable qualities of India Rubber, with none of its objectionable qualities, is rapidly superseding the former for manufacturing purposes. Mr. William Rider, President of the North American Gutta Percha Company, after having experimented with the article for some years, has succeeded in applying it to a number and variety of uses. Rubber may be regarded as an "old fogy" article, which has seen its best days—at least, as a source of profit to the manufacturer—and this it is which would seem to make it prudent for Goodyear and Day to compromise their difficulties, and retire with whatever money they may have accumulated.

From the Advocate and Register—Rahway, Dec. 16, 1853.

Gutta Percha and Rubber Controversy.—We last week stated the position of the two parties in this controversy, and promised in a future number to state some of the differences between India Rubber and Gutta Percha, which promise we now proceed

to fulfil. We have taken pains to look over several works on the subject, and we have come to the following conclusions, viz. :—The tree from which Gutta Percha is obtained is botanically unknown; but enough is known about it to show that it botanically belongs to a different order or family of trees from the tree from which India Rubber is obtained. Gutta Percha is a pasty juice of a brownish color when taken from the tree, which solidifies in a few minutes after being extracted, and soon becomes dry and as hard as wood, without the least stickiness in feeling, and presents a fibrous appearance. India Rubber is a gummy substance, thick and white, like cream, when taken from the tree, and coagulates after a while and forms a sticky curd, in appearance like cheese curd with the whey around it. Gutta Percha of commerce is of a light brown color, a fibrous material, and without elasticity; is a non-conductor of electricity, as well as of heat and cold; is extremely tenacious, and not affected by being brought in contact with oil or other fatty substances, and has a peculiar pleasant odor about it. India Rubber of commerce is black, or nearly so, and is a pasty, sticky material; its greatest characteristic is its elasticity, and the certain decomposition and ruin resulting from its coming in contact with oil or other fatty substances, while it is a good conductor of electricity, as well as heat and cold; and, as every one knows, has a very offensive smell about it. These comparative facts, taken in connection with the fact that under Rider's patent Gutta Percha is made elastic and pliable, is a much lighter material, and susceptible of a more beautiful finish, give the North American Gutta Percha Company great advantages over India Rubber in water-proof clothing, and a great variety of other articles—which is another of the reasons for which Mr. Judson, the attorney of Charles Goodyear, has published his newspaper articles against Mr. Rider and his Company.

From the Orange Journal—Orange, N. J.

Gutta Percha Goods.—It is but a few years—say ten or a dozen—since Europeans and Americans had any particular knowledge of Gutta Percha. It was first obtained through a Dr. Montgomerie, assistant surgeon at Singapore. His discovery of it was accidental. He had known the tree, but nothing of its particular qualities. One day he saw a native wood-chopper having an axe with a handle of such singular appearance, he was led to examine it. To his surprise he learned that it was made from the juice of the Gutta tree, moulded into a form to answer for the handle to an axe. The fact was so new and marvellous in vegetable physiology, he was induced to pursue his inquiries in regard to the tree, its products, and the uses to which they might be appropriated. The whole was communicated to men of science in this country and in Europe, and not a few commenced experiments upon the Gutta Percha, in reference to its importance in the economy of human society. From certain qualities it was found to possess, resembling India Rubber, the inference was drawn that by a similar process of action upon it, Gutta Percha might be applied to similar purposes. As India Rubber was just then beginning, as it were, to unfold its numerous capabilities and its vast importance in the arts, those most successfully engaged in experiments made upon that substance, and in manufacturing it, were naturally the first to begin operations upon the Gutta Percha. Hence, shortly after it had been imported into England, Messrs. William Rider and Brothers, of New-York, made an importation of it. This was about seven or eight years since. The great variety of useful purposes to which this article may be applied, will appear from the advertisement of the North American Gutta Percha Company, and may furnish an article for a subsequent number.

From the Norfolk News—Norfolk, Va.

The never-ending lawsuit of Goodyear vs. Day, in the Rubber contest, is likely to end in a way little dreamed of a year ago by either of them. From present indications Gutta Percha, a comparatively new and but little known article, is to supersede nearly all the articles now made of India Rubber. The North American Gutta Percha Company of New-York, under the patent of Mr. Rider, are now supplying the market with water-proof clothing, and hundreds of other articles, which throw India Rubber into the shade, as to style of finish, durability, and expense, while they are free from odor, and not liable to decompose. These facts are matters of great importance to those desiring water-proof goods.

From the Virginia Free Press—Charlston, Va.

A recent discovery by Mr. Rider, of New-York, of a process of applying Gutta Percha to the manufacture of water-proof clothing, and many other articles, which have heretofore been made of India Rubber, bids fair to be one of the most important discoveries of the age. Under this discovery Gutta Percha is made elastic and pliable like India Rubber, and a fabric is produced having all the desirable qualities of Vulcanized India Rubber, without the objectionable ones.

From the Long Island Democrat.

Goodyear and Day not only have forminable rivals in each other, but a still more formidable one has sprung up in Rider's Gutta Percha discovery; which, from the fact that Gutta Percha under Rider's patent is made to possess all the desirable qualities of Vulcanized Rubber, while it has none of its objectionable ones, is causing the former to fast supersede the latter for very many articles. This new manufacture is now being carried on by the North American Gutta Percha Company, 80 Cedar street, New-York, who are the exclusive owners of the patent.

From the Whitehall Chronicle—Whitehall, N. Y.

The manufacture of water-proof clothing, and many other articles, from Gutta Percha, under Rider's patent, by the North American Gutta Percha Company, of New York, is carried on extensively. These articles claim to have several advantages over India Rubber. They are more durable, a non-conductor of heat and cold; therefore when used for clothing give greater protection to the person, as well as being water-proof, an important advantage, while they do not get sticky like India Rubber when exposed to heat or friction, which certainly is very desirable to the consumer, and which must give Gutta Percha the preference as it becomes known.

From the Memorial—Plymouth, Mass.

The Messrs. Riders, of New-York, long engaged in the Rubber manufacture, have discovered a mode of preparing Gutta Percha, which gives it all the pliability and elasticity of India Rubber—it converts Gutta Percha, which before was as hard as wood, and little more than a curiosity, into one of the most beautiful of known water-proof substances. The discovery has been patented, and is now being worked, in the manufacture of clothing and other goods, very extensively by the North American Gutta Percha Company of New York.

From the Buffalo Republican—Buffalo, N. Y.

For years Goodyear and Day have been contending against each other, and for aught we can see the differences are as great as ever. In the mean time Gutta Percha has come into the field, and is already having a great run, with every prospect of entirely superseding the use of India Rubber. The advantages of this wonderful material over India Rubber are, that it is more durable, less expensive, free from disagreeable smell, and does not decompose and get sticky. From the vast variety of water-proof clothing and other articles being made by the North American Gutta Percha Company of New-York, it is plainly seen that Rubber must give way to Gutta Percha.

From the Westchester Herald—Sing-Sing.

The manufacturers of India Rubber goods are having a formidable rival in Vulcanized Gutta Percha, under Rider's patent. This discovery, by which Gutta Percha fabrics are made, possessing the desirable properties of India Rubber, but not with the variety of objectionable ones, will be found very acceptable to those who use water-proof goods. The North American Gutta Percha Company own this patent exclusively, and are making large quantities of clothing and other articles.

From the Republican and Argus.

We never expected to find a substitute for India Rubber, but one has been recently found in the article of Gutta Percha. Bountiful nature has unthought of treasures, and science unknown resources. A mode of manufacture has been discovered by Mr. Rider, of New-York, which gives Gutta Percha all the pliability and elasticity of India Rubber, without its unpleasant and objectionable qualities. With such facts, this may be ranked among the most wonderful discoveries of the age.

From the Democrat—Dedham, Mass.

Of course all have read the fable of the Lion and Bear, who, when they were quarrelling to determine which should have the body of an animal they had either slain or found dead, lost their prize by a wily fox taking advantage of their contention, and dragging it off to his hole. The never-ending lawsuits of Goodyear vs. Day, in the India Rubber contest, are likely to end in a manner similar to that of the case, Lion vs. Bear, in the instance adverted to in the fable. For years Goodyear and Day have been contending against one another, and, for aught it can be seen, the differences between them are as great as ever. In the mean time, Mr. William Rider, the Gutta Percha King, has a clear field, and nobody to oppose him; and whilst Goodyear and Day are squandering fortunes, which they need to carry on their business, Rider is rapidly extending his operations. Taking into consideration the fact of Gutta Percha being much superior to India Rubber for all practical purposes, it is easy to predict that Mr. Rider will gain the prize for which Goodyear and Day have been quarrelling for years.

From the Democrat—Jamaica, L. I.

When Austria and Hungary were in the death-lock of their struggles, there came a new element into the contest—the power of the Czar. In the war now begun, when the Czar and the Sultan are in the thick of an exterminating fight, we may look for a third power, probably under the eagles of Napoleon. There is a picture somewhere, of a man upon whom, at the same instant, a tiger springs from a jungle, and a crocodile rushes from a river; the man escapes, while the tiger springs into the mouth of the crocodile.—Like the Czar, like Napoleon III, like the crocodile, (if he really swallowed the tiger,) seems the destiny of the North American Gutta Percha Company, of New York, in the great war of Rubber patents. While Rubbers are melting, rotting and sticking together, and emitting their disagreeable odors from the heat of the conflict, Gutta Percha, with Science for its Aidecamp, fresh, sweet, clean, elastic, and almost imperishable, takes the field. The India Rubber patents are scarcely worth a further contest, if the claims of Gutta Percha are made good; for the articles manufactured by the North American Gutta Percha Co., while they possess all the admirable qualities of India Rubber, are free from its well-known defects, and have other and peculiar excellences; so that, if the supply of raw material is only sufficiently abundant, we have the element of a revolution in social economics, and the arts of life. We may have clothing, furniture, utensils, works of art, books, maps, perhaps even newspapers, all of Gutta Percha! The Company is extending its operations; and its managers are sanguine in their belief, that they have achieved not only a triumph over their sticky and not always tough rival, but have added a new and important element to the true riches of society.

In addition to the foregoing expressions by the Press, the following papers have favorably noticed Rider's Patent Gutta Percha fabrics, since May last:—

Intelligencer,	Amsterdam, N. Y.	Weekly Transcript,	Warren, O.
Democrat,	Carlyle, Pa.	Minerva,	Thibodaux, La.
Patriot,	Woonsocket, R. I.	Indiana American,	Brookville, Ind.
Michigan Argus,	Ann Arbour, Mich.	Telegraph,	Washington, Ark.
Advocate,	Prattsville, N. Y.	Whig,	Quincy, Ill.
Sentinel,	Ogdensburgh, N.Y.	Village Record,	West Chester, Pa.
Chronicle,	Clarksville, Tenn.	Times,	Glasgow, Mo.
Western Reserve,	Warren, Ohio.	Southern Star,	Jackson, Miss.
Daily Courier,	Lafayette, Ind.	Miami Visitor,	Waynesville, O.
Wisconsin Tribune,	Mineral Point, Wis.	Tenth Legion,	Woodstock, Va.
Central Georgian,	Sandersville, Ga.	Republican,	Ellicottville, N. Y.
Southern Tier Times,	Owego, N. Y.	Repub'n Watchman,	Monticello, N. Y.
Beacon,	Aurora, Ill.	Tioga Eagle,	Wellsboro,' Pa.
Central New Yorker,	Syracuse, N. Y.	Jeffersonian,	Cambridge, O.
Democratic Press,	York, Pa.	Democrat,	Bolivar, Tenn.
Suffolk Gazette,	Sag Harbor, N. Y.	Free Press,	Detroit, Mich.
Gazette,	Easton, Ind.	Herald,	Lacon, Ill.
Sussex Register,	Newton, N. J.	Free Press,	Charlestown, Va.
Chronicle,	Clarksville, Tenn.	Sentinel,	Tallahassee, Fla.
Shelby News,	Shelbyville, Ky.	Spectator,	Asheville, N. C.

Beacon,	Aurora, Ill.
Hawkeye,	Burlington, Iowa.
Organ,	West Meriden, Con.
W. C. Reporter,	Elkhorn, Wis.
Inquirer,	Hempstead, L. I.
Elevator,	Columbus, O.
Olive Branch,	Norristown, Pa.
Republican and Argus,	Baltimore, Md.
Inquirer,	Portsmouth, O.
Democrat,	Dedham, Mass.
News,	Norfolk, Va.
Tenth Legion,	Gallatin, Tenn.
Herald,	Quincy, Ill.
Odd Fellow,	Boonsboro, Md.
Courier and Journal,	Potsdam, N. Y.
Tribune,	Mobile, Ala.
Mirror,	Morgantown, Va.
Register,	Middlebury, Vt.
Gazette,	Vincennes, Ind.
Chronicle,	Whitehall, N. Y.
Republican,	Ottawa, Ill.
American,	Waterbury, Conn.
O. S. Times,	Mount Vernon, O.
Courier,	New Orleans, La.
Courier,	Lafayette, Ind.
Gazette,	Elmira, N. Y.
Gazette,	Wilmington, Del.
Herald,	Grove Hill, Ala.
Herald,	Sandy Hill, N. Y.
Standard,	Butler, Ala.
Western Press,	Mercer, Pa.
American Democrat,	Carlisle, Pa.
Palladium,	Oswego, N. Y.
Observer,	St. Clair, Mich.
Telegraph,	Jonesville, Mich.
Republican,	Marietta, O.
Free Trader,	Ottawa, Ill.

A LIST

OF MANY OF THE ARTICLES TO WHICH

Rider's Patent Vulcanized Gutta Percha

MAY BE SUCCESSFULLY APPLIED.

Clothing Department.

Officers' Coats,
Pea Coats,
Sack Coats,
Monkey Jackets,
Short Sacks,
Reefing Jackets,
Firemens' Coats,
Navy Coats,
Capes with Sleeves,
Capes Plain,
Cubans,
Talmas,
Cloaks,
Cadet Capes,
Firemens' Capes,
Ponchos Plain,
Ponchos Fancy,
Overalls,
Sportmen's Coats,
Physicians' Capes,
Plantation Capes,
Pantaloons,
Walking Leggins,
Riding do
Miners' do
Camp Blankets,
Jockey Caps,
Navy Caps,
Hussar Caps,
Storm Hats,
Pilot Hats,
Souwesters,
Firemens' Hats,
Miners' do
Ladies' Aprons,
Ladies' Capes,
Ladies' Leggins,
Boots Assorted,
Shoes Assorted,
Mechanics' Aprons,
Hatters' do
Tanners' do
Life Preservers,
Travelling Bags,
Sailors' do
Sponge do
Gloves,
Mittens,
Armhole Shields,
Boot and Shoe Soles,
Boot & Shoe Inner Soles,
Baptismal Pants,
Bathing Caps,
School Satchels,
Negro Brogans,
Life Vests,
Life Jackets.

Surgical Articles, &c.

Hospital Sheeting,
Dissecting Aprons,
Self Adjusting Aprons,
Breast Pumps,
Syringes,
Nursing Bottles,
Sheet Gutta Percha,
Acid Vats,
Lining for Trunks,
Bottles,
Gas Bags,
Finger Cots,
Stethoscope,
Ear Trumpets,
Gutta Percha Cement,
Bed Pans,
Tubing,
Carboys,
Syphons,
Funnels,
Battery Cells,
Water Bags,
Cholera do
False Muscles,
Artificial Sponge,
Foot Baths,
Shower Baths,
Flasks,
Funnels,
Knee Bandages,
Eye Syringes,
Ear " [blains.
Balsam for Cuts and Chil-
Vessels for Acids,
Oil Cans,
Pessaries.

Naval Articles.

Life Boats and Spars,
Life Buoys,
Life Jackets,
Signal Balls,
Anchor Buoys,
Cannon Covers,
Hammock Cloths,
Cannon Cartriges,
Deck Buckets,
Fire Buckets,
Water Hose,
Teller Ropes,
Letter Bags,
Boat Floats,
Sailors' Bags,
Officers' Coats,
Bread Bags.
Hospital Sheeting,
Souwesters,
Sailors' Hats,
Bathing Tubs,
Hammocks,
Boarding Belts,
Musket Cases,
Muzzle Covers,
Pistol Cases,
Sword Cases,
Submarine Dresses,
Passing Bags,
Fire Screens,
Reefing Jackets,
Ship Sails.

Military Articles.

Cannon Covers,
Tarpaulins,
Tent Carpets,
Knapsacks,
Haversacks,
Canteens,
Camp Blankets,
Water Tanks,
Water Bottles,
Wagon Covers,
Cartridge Boxes and Belts,
Caps and Cap Covers,
Drinking Cups,
Sword Cases,
Bayonet Scabbards,
Gun Cases,
Pistol Cases,
Pistol Holsters,
Provision Bags,
Salt Bags,
Forage Bags,
Port Fire Cases,
Gunners' Sleeves,
Sponge or Swab Cases,
Gunners' Haversacks,
Powder Bags,
Cartridges,
Cannon Cylinders,
Ponton Boats,
Portable Boats,
Wagon Floats,
Fire Buckets,
Water Pails,
Saddle Covers,
Halters,
Bridles,
Whips,
Horse Covers,
Feed Bags,
Medicine Bags,
Hospital Sheeting.

Hard Compounds—a Substitute for Ivory, Horn, Shell, Pearl, &c.

Combs of all kinds,
Canes,
Umbrella Sticks,
Knife Handles,
Knobs,
Veneering,
Brush Handles,
Musical Instruments,
Furniture,
Harness Linings,
Fancy Boxes,
Book Covers,
Medallions,
Rulers,
Picture Frames,
Ornamental Mouldings,
Speaking Tubing,
Cricket Balls,
Police Staves,
Fencing Sticks,
Walking Canes,
Razor Strops,
Marking Pencils and Crayons.

Miscellaneous Articles.

Carriage Cloths,
Packing Cloths,
Fancy Cloths, assorted,
Table Covers,
Piano Forte Covers,
Crumb Cloths,
Cloths for Smiths' Bellows,
" " Melodeans,
" " Hand Bellows,
" " Accordeons,
" " Organ Bellows,
Card Cloths,
Drinking Cups,
Fire Buckets,
Game Bags,
Fish Bags,
Fishing Bobs and Buoys,
Pails, assorted,
Feed Bags, sorted,
Sheet Gutta Percha, assorted,
Pencil Erasers,
Ink Erasers,
Steam Packing,
Machine Bands,
Carpeting,
Balls, assorted,
Toys, all kinds,
Crying Babies,
Hose, all sizes,
Gas and other Tubing,
Whips, all kinds,
Saddle Bags,
Texan Wallets,
Horse Covers,
Horse Hoods,
Horse Boots,
Horse Fenders,
Omnibus Aprons,
Stage Aprons,
Baggage Covers,
Baggage Aprons,
Tobacco Wallets,
Umbrella Covers,
Water Tanks,
Water Bottles,
Drinking Cups,
Picnic Cups,
Railroad Tumblers,
Wagon Covers,
Warehouse Tarpaulins,
Hat Covers,
Air Beds,
Water Beds,
Pillows,
Cushions,
Coffee Covers,
Car Linings,
Car Cushions,
Bed Sacking,
Wash-stand Mats,
Parchment,
Fording Dresses,
Fishing Boots,
Harness, all kinds,
Boot Binding,
Book Covers,
Carriage Tires,
Saddle Cloths,
Halters,
Inkstands,
Jars and Jar Covers,
Vases and Flower Pots,
Clothes-Lines,
Fly Nets,
Portmanteaus,
Printers' Aprons,
Printers' Rollers,
Top Roll Covers,
Carriage Robes,
Table Mats,
Wagon Boxes,
Machinery Boxes,
Car Springs,
Wagon Springs,
Decoy Ducks,
Decoy Birds,
Marking Slates,
Marking Pencils,
Pump Buckets,
Pump Valves,
Speaking Tubes,
Gutta Percha Tissues,
Bottling Boots,
Gutta Percha Cement,
Gasometers,
Putty Bags,
Lining for Bonnets and Dresses,
Felt Edging for Paper Makers,
Bosses for Woolen Manufacturers,
Flax Holder,
Trunk Covers,
Window Cords,
Washers,
Book Binding,
Surveyor Cases,
Lining for Boxes,
Threads and Strings,
Cordage.

FIRST ANNUAL STATEMENT

OF THE

NORTH AMERICAN GUTTA PERCHA COMPANY.

The Annual Statement of the North American Gutta Percha Company, of New York, made in accordance with the law under which it was organized, is as follows:

Whole Capital Stock, Five Hundred Thousand Dollars.

Amount of Capital Stock paid in, five hundred thousand dollars,	$500,000 00
Present available assets, exclusive of machinery, factory, and patent rights unsold, belonging to the Company, one hundred and seventy-six thousand four hundred and seventy-three $\frac{54}{100}$ dollars,	176,473 54
	$676,473 54
Whole amount of the liabilities of the Company, twenty-one thousand six hundred and fifty dollars and four cents,	21,650 04

WILLIAM RIDER, PRES'T
N. A. G. P. Co.

E. R. BILLINGS,
O. W. C. SCHACK,
C. N. S. ROWLAND,
R. LEWIN,
H. A BOGERT,
JOHN RIDER,
H. J. HALE,
SILAS HICKS, JR.,
} Trustees.

Sworn to, before me, this 17th day of January, 1854, by E. R. Billings, to me known as the Secretary of the above Company.

J. L. HALSEY, *Comm'r of Deeds.*

At an Election of Trustees, held 17th January, 1854, the following Trustees were elected for the ensuing year:

WILLIAM RIDER,
ROBERT LEWIN,
CHAS. N. S. ROWLAND,
LUTHER R. MARSH,
HOLMAN J. HALE,
JOHN RIDER,
THOMAS H. BUCKMASTER,
O. W. C. SCHACK,
GEORGE H. PENFIELD.

AWARD OF SILVER MEDAL,

BEING THE HIGHEST PRIZE,

AT THE

CRYSTAL PALACE.

A Silver Medal has been awarded by the Jury, at the Exhibition at the Crystal Palace, to

"The North American Gutta Percha Company,

No. 80 CEDAR STREET, NEW YORK,

For Gutta Percha Goods, manufactured under Rider's Patent."

RIDER'S PATENT

VULCANIZED GUTTA PERCHA GOODS,

MANUFACTURED IN GREAT VARIETY,

AND FOR SALE BY THE

North American Gutta Percha Company,

No. 102 BROADWAY,

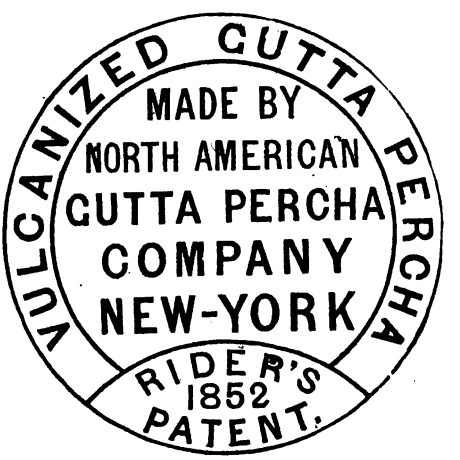
NEW YORK.

Purchasers should bear in mind that although Vulcanized Gutta Percha Goods, made under Rider's Patent, somewhat resemble Vulcanized India Rubber in appearance, they are very different in their properties—far superior in quality—have a natural lustre like patent leather, and are cheaper in price.

They are also free from unpleasant smell, and not liable to *decompose and become sticky*, like India Rubber; being non conductors of Electricity, as well as heat and cold, can be used with much more comfort for Clothing, Boots and Shoes, and many other articles. Its grain is finer, and, possessing an inherent oily substance, its repellent properties are superior.

As this wonderful material is proof against oil and other fatty substances, it can (under Rider's Patent) be applied in the manufacture of a vast variety of goods, to which India Rubber is not adapted.

This Company have extensive works, with powerful machinery, and are prepared to execute large orders at short notice.



No goods genuine, unless having the annexed trade-mark of the Company.

Purchasers of Waterproof goods are invited to examine the stock of this Company before buying elsewhere.

WM. RIDER, *Pres't*
N. A. G. P. Co.

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